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USSR Report

ECONOMIC AFFAIRS

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USSR REPORT ECONOMIC AFFAIRS

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PLANNING AND PLAN IMPLEMENTATION

UKSSR GOSPLAN CHAIRMAN DISCUSSES REPUBLIC'S FIVE-YEAR PLAN

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 2, Feb 86 pp 3-11

[Article by V. Masol, chairman, UkSSR Gosplan; deputy chairman, UkSSR Council of Ministers: "New Horizons in the Economic and Social Development of the Ukrainian SSR"]

[Text] Our country is currently finishing preparations for the 27th CPSU Congress. Communists and all Soviet people are concentrating on questions relating to the acceleration of economic and social development, on drafts of pre-congress program documents that articulate the long-range general line of the CPSU, that reveal the party's economic strategy, and that consistently, from one five-year plan to the next, define the avenues of qualitative growth of the productive forces, of improving production relations, of raising the people's living standard and cultural level, and of strengthening our country's economic potential and defensive might.

In the next 15 years, it is planned to double our production potential while at the same time dramatically modernizing its quality. This will ensure an increase in production potential that will be equal to the potential created during all preceding years of socialist construction. The aggregate of scientific-technical as well as organizational-economic measures plus the all-round use of the accumulated science-production potential and the wealth of our country's experience in economic construction are the basis for attaining this goal.

All aspects of the Soviet Ukraine's economy, science and culture have been developed as part of the nation's unified national economic complex and the Soviet Ukraine today makes a weightier contribution to the solution of problems confronting the entire nation. During the 11th Five-Year Plan, the republic has substantially increased the scale of social production, has raised its technical level, has reaped a higher return on its material, labor and financial resources, and has implemented a considerable social program. Qualitative changes in the production apparatus and substantial improvements in the content of labor are the result of all this.

Between 1981 and 1985, the five-year plan target for national income was surpassed. The average annual volume of its growth was 1.4-fold higher than under the 10th Five-Year Plan.

The level of fulfillment of targets for increasing the effectiveness of production has risen. Under the last five-year plan, the entire increase in national income was for the first time the result of the higher productivity of social labor, which was targeted to rise by 19 percent, but actually rose by 22 percent. The labor of approximately four million persons was saved. This was higher than the five-year plan target.

Much has been done to secure the more rational use of material-technical resources and to utilize secondary raw materials and waste materials in production. The purposeful labor of work collectives has produced impressive results: the lowering of the materials-output ratio made it possible to economize an additional 3.7 billion rubles.

Scientific-technical progress is to an ever increasing degree becoming the decisive factor in the development of material production and in increasing its effectiveness. The return on the fulfillment of scientific-technical programs is now higher. The economic effect of republic scientific-technical programs alone exceeded three billion rubles.

As envisaged in the five-year plan, machine building and metalworking, the chemical and petrochemical industry, and atomic energy, the share of which in total electric power production rose to almost 20 percent, have been developing in republic industry at a relatively faster rate. In 5 years, above-plan sales reached the 4.5 billion ruble mark. The five-year plan was surpassed for the extraction of individual types of fuel resources, for the production of mineral fertilizers, motor vehicles, computers, excavators, chemical equipment, and machinery for animal husbandry and feed production. The growth of consumer goods production (Group 'B') was faster than the growth of producer goods (Group 'A'). The production of products bearing the state Quality Emblem increased 1.5-fold.

Nevertheless, the republic's industrial potential is still not being utilized in full measure, especially in the basic branches--ferrous metallurgy, coal industry, construction materials industry. As before, many enterprises are not fulfilling their contractual obligations to deliver the specified product mix. The quality of many consumer goods, particularly in light and local industry, whose enterprises are frequently subjected to sanctions for delivering defective products to trade, leaves much to be desired. Such a reserve as bringing newly activated enterprises and facilities up to rated capacity on schedule is not sufficiently utilized. The main reason for these shortcomings is that the proper understanding is not everywhere shown for the use of the production and scientific-technical potential, for converting enterprises to the intensive path of development.

The broad complex of measures indicated by the communist party for the development of the agro-industrial complex and its basic link--agriculture, for which over 30 billion rubles in capital investments have been allocated, was consistently implemented under the last five-year plan. This made it possible to supply kolkhozes and sovkhoses with new, more productive machinery, to increase deliveries of mineral fertilizers, to reclaim considerable areas of land, to expand the use of industrial production methods, and on this basis to increase purchases of the majority of the most

important types of agricultural products compared with 1976-80. The growth of the production of livestock products has been positively reflected in the work of the processing branches of the agro-industrial complex and in the better supply of the population with meat and dairy products.

At the same time, in the development of the republic's agro-industrial complex, there are still many acute, fundamental points, the existence of which impedes the development of this most important sector of the economy. By no means can all of them be explained by adverse weather conditions (which indeed has been the case in years past); a frequent cause is considerable shortcomings in the work of farms. On a number of kolkhozes and sovkhoses, the yield of agricultural crops is still low, feed resources are irrationally used, there is livestock and poultry murrain, the effectiveness of production rises slowly, and the return on reclaimed land is insufficient. Considerable losses are sustained in harvesting, transporting, storing, and processing the product. This has in large measure predetermined the difficulties encountered in supplying the population with certain food commodities.

Despite positive changes, substantial shortcomings persist in the work of transport organizations. Demand should first of all be made upon railroad management. The level of fulfillment of the traffic schedule for freight and passenger trains continues to be low. Considerable losses of freight resources stem from above-norm idle time of railroad cars at technical stations. It must be recognized that the blame here lies not only with transport workers, but also with collectives of industrial enterprises, building sites, and agricultural organizations that frequently fail to observe the schedule for loading and unloading operations. The elimination of these shortcomings is the common concern of all participants in the transport conveyer.

The fulfillment of targets of the 11th Five-Year Plan was in large measure predetermined by the state of affairs in capital construction. No little amount has been done in the years that have elapsed. Over 130 large new industrial enterprises, about 700 production capacities and facilities, and a considerable number of schools, hospitals, preschool institutions, and other sociocultural facilities have been put into operation. More attention is devoted to the reconstruction and technical retooling of existing enterprises.

Nevertheless, questions pertaining to the concentration of funds and material-technical resources and to completing construction projects on schedule are still not being fully solved in capital construction. The capacities of the production base of the construction industry and construction organizations are growing at a slow pace. Nor can we be satisfied with the quality of construction, especially housing.

Difficulties and shortcomings in the development of material production largely stem from the fact that the level of the effort to strengthen labor discipline, organization and order is still low.

When we evaluate the republic's economic performance during the last five-year plan as a whole, we should emphasize that the economy has taken a new,

important quantitative and qualitative step in its development. This has created a reliable foundation for raising the people's living standard still further--a target for which four-fifths of the national income was allocated.

Real income increased by almost 14 percent under the 11th Five-Year Plan. A number of state measures were implemented to raise wages in individual branches of the national economy, to improve the remuneration of labor, social security and medical care, and to increase aid to families with children, to the aged, to war and labor invalids, and to families of deceased service personnel. Approximately eight million republic dwellers have improved their housing conditions. A large volume of work has been performed to raise the level of communal services, to provide population centers with amenities, and to improve transport services. The implementation of general education and vocational school reform measures has begun. The work of culture and sports institutions has improved. The network of trade and consumer service facilities has been expanded. Measures to protect the environment and to improve the ecological situation have had no little social significance.

All this has created a firm foundation for the further development of material production and for improving the people's well-being. The republic is presently drafting its 12th Five-Year Plan in full accordance with the Basic Directions of Economic and Social Development in the USSR in 1986-1990 and the Period up to the Year 2000. Its most important points have found concentrated expression in the main task which calls for raising the rate and effectiveness of development of the economy based on the acceleration of scientific-technical progress, technical retooling and reconstruction of production, the intensive use of the existing production potential, improvement of the system of management and the economic mechanism and on this basis the further improvement of the Soviet people's well-being.

Large-scale, intensive targets pertaining to the development of the production sphere and consumer service branches are accordingly scheduled for the years ahead. It is planned to raise the productive forces and production relations to a qualitatively new level and, on the basis of the introduction of advances of science and technology, to secure higher growth rates for the key indicators than were obtained under the 11th Five-Year Plan.

The republic economy has attained such a level of development that the search for new approaches to planning and management and the all-round involvement of available reserves in production were required in order to secure its further growth. The orientation toward the practical transition to highly intensive management methods is due to the changing situation, in particular, the increasing difficulty of satisfying the growing need for labor and nonrenewable raw and other materials, and the scarcity of land and water resources.

As noted at the April (1985) Plenum of the CPSU Central Committee and in key party political documents, the primary role in the intensification of the economy belongs to scientific-technical progress. Only on this basis can there be cardinal and accelerated retooling of all branches of the national economy at a qualitatively new technological level.

These tasks will be realized primarily through a system of reciprocally coordinated scientific and technical programs elaborated for the 12th Five-Year Plan. Republic scientific-technical target programs ("Labor," "Energy Complex," "Materials-Output Ratio," "Agricultural Complex," "Metal," "Transport") and the "Biotechnology" scientific program will be the basic programs in this system. The economic effect of the programs will be twice greater compared with the 11th Five-Year Plan.

In the years ahead, there will be an increased effort to develop the most important, priority and interbranch directions of science; to develop and introduce on a large scale new generations of machinery and technologies on a par with the best in the nation and the world. The further technological renovation of production will also be based on the acceleration of resource-saving, continuous, closed, and limited-operation technologies.

Drafts of the new Program of the CPSU and Basic Directions emphasize the need for greater resource conservation everywhere. The conservation of all types of resources is presently advanced to the forefront because, as V. I. Lenin emphasized, communism begins where average workers are concerned with the multiplication and saving of goods that go not to them personally, not to their "near ones," but rather to "far ones"--all society. Therefore, matters must be organized in such a way that more final products can be produced from the same, or better yet, a smaller quantity of raw materials, fuel, and supplies. In future years, it will be necessary to satisfy 75-80 percent of the additional requirement for material resources on the basis of their conservation.

Under the current five-year plan, a significant share of the lowering of material costs will be secured by introducing resource-saving technologies in the leading branches of the republic's economy. The scale of this effort is very large: 350 such technologies are to be introduced in 1986 alone. It is planned to reduce the materials-output ratio by 0.4 percent and on that basis to economize 450 million rubles' worth of raw materials, supplies, fuel, electric power, and other objects of labor.

Change in investment policy is an important feature of the period ahead. The problem of increasing the effectiveness of capital investment is now advanced to the forefront. This is to be achieved by shifting the center of gravity from new construction to the technical retooling and reconstruction of existing enterprises, with allocations for this purpose being increased almost 1.5-fold compared with the 11th Five-Year Plan. There will be a substantial increase in the share of spending on equipment and machines. In the distribution of capital investments, priority is given to the leading branches: machine building, ferrous metallurgy, the fuel-energy complex, and light and food industry. Provision is also made for substantially reducing the number of construction projects in progress at the same time and for increasing the share of allocations for nearly completed priority projects, which will make it possible to keep the level of construction work in progress within the assigned limits.

Primary attention in the current five-year plan is devoted to improving the use of the republic's existing production potential. Accordingly, there will

be considerable rejuvenation of productive capital, especially in branches where this problem is most pressing. The retirement of worn-out and obsolete capital will be stepped up, starting with the active part of this capital. This important work makes higher demands on the improvement of the forms and methods of accounting and monitoring the condition and use of the production apparatus, which will be facilitated by the general inventory of productive fixed capital. The certification of work stations will also serve this goal.

Tasks indicated in the draft of the Basic Directions regarding the development of the material production sphere in the face of limited manpower require a dramatic increase in labor productivity. During the quinquennium, republic labor productivity must increase approximately 1.2-fold, thereby producing the entire increase in national income and saving the labor of 3.5 million persons. The realization of these targets will be coupled with the steady lowering of the share of manual and strenuous physical labor, especially in loading-unloading, warehouse and other auxiliary labor.

The scale of the tasks confronting the economy predetermines the need for consistent improvement in the planning and management of the national economy and the further development of the economic mechanism. This effort essentially means orienting the system of indicators toward the attainment of high end results and the effective use of all types of production resources. The further expansion of the circle of ministries converted to the new conditions of operation will serve this goal. In the republic, enterprises belonging to the Ministry of Light Industry, the Ministry of Local Industry, branches of the food industry, the Ministry of Consumer Services, the Ministry of Communications, and a number of union ministries, including machine building and the chemical industry, have been operating under these conditions beginning this year. Work in this direction is scheduled for completion in 1987.

Special emphasis in improving the management of the national economy is placed on coordinating the activity of interconnected branches, associations and production facilities. The establishment of interbranch management agencies is planned accordingly. An example of this is the new agency for managing the agro-industrial complex--the USSR State Agro-Industrial Committee, to which the Ukrainian SSR State Agro-Industrial Committee belongs. It should be remembered that work under the new conditions requires the creative interpretation of accumulated experience and the continuous search for new, more effective avenues of functioning of all elements of management and the elimination of a formal approach to the work. Only then can the desired result be achieved.

The further development of material production is scheduled for the 12th Five-Year Plan. In accordance with the draft of the Basic Directions, republic industry must increase its output by 18-21 percent in 5 years' time. This will require the sequential restructuring of industry, improvements in interbranch and intrabrand ties, the development of specialization and cooperation, and accelerated conversion to the production of high-quality products. This will create conditions for supplying the national economy more fully with fuel and energy resources, machinery, equipment, and other modern means of production and for supplying the population with consumer goods.

In the technical retooling and intensification of production and in the acceleration of the production of new types of products, the decisive role belongs to machine building. Instrument making, machine tool construction and chemical machine building will develop at a relatively more rapid rate. Systems and complexes of machines for automating production processes will be developed. More NC machine tools and equipment, robotized complexes, and equipment for adaptive automated lines will be produced. The latter will make it possible to raise labor productivity substantially, often several-fold, to improve product quality, to economize capital investments, to reduce production area and the number of service personnel by increasing the number of shifts. In addition to this, machine building will continue to devote its unflagging attention to increasing the production of machinery for branches in the agro-industrial complex. Substantial technological changes are planned in the production of blanks, in machining, and in assembly work.

Targets of the Energy Program will continue to be met during the current five-year plan. The draft of the Basic Directions calls for raising the republic's electric power production to 320 billion kilowatt-hours in 1990. There will be an increase in the level of mechanization of production processes in the coal industry in the form of complexes for mining thin and steep seams, the use of more highly sophisticated equipment in mine preparation operations, in subsurface transport, in surface complexes, and at concentrating mills. There will be a slight increase in the volume of primary refining of oil, which will increase the Ukraine's supply of Ukrainian-produced petroleum products while simultaneously reducing expenditures on their transport.

Branches producing construction materials will undergo further development. The main task is to improve their structure and quality based on the need to create new, progressive technology and to realize the resource-conserving direction of economic growth. Accordingly, under the "Metal" program, there will be a considerable volume of work in ferrous metallurgy in connection with the reconstruction, modernization and technical retooling of existing facilities, rolling mills in particular, which will make it possible to organize the production of new types of metal products and to satisfy the needs of the national economy more completely. The production of rolled stock from low-alloy steel will be increased 1.3-fold; thermohardened stock--1.8-fold; polymer-coated pipe--1.3-fold. These and other measures will make it possible to save more than two million tons of metal in 5 years.

Other types of higher-quality construction materials will also be produced in greater quantity: synthetic resins and plastics, fiberboard and wood particle board, plywood, gravel, reinforced concrete products, sheet glass with special spectral features, multiple-glass units, and sheet slag-glass ceramic.

The party's policy of intensive economic development will also have a beneficial influence on the agro-industrial complex, on the fulfillment of the Food Program, and on improving the supply of consumer goods. The most important task here is to improve the supply of food for the working people. This means not only increasing the quantity of food production, but also and primarily means bringing about substantial qualitative changes in structure and assortment.

The realization of these tasks depends in large measure on the further development of agriculture. It is planned to increase the average gross annual output of this republic branch by 13-15 percent, to increase grain production to 52-54 million tons and to raised sugar beet production in 1990 to 53-55 million tons. The production of livestock products will increase on the basis of the further strengthening of the fodder base.

In order to reach these goals, the agro-industrial complex is devoting much attention to the improvement of planning and management and to the active introduction of intensive production and cost accounting technologies. In place of unrelated agencies, the recently established Gosagroprom will pursue a uniform, planned, scientific-technical, and economic policy and will be responsible for supplying the population with food and industry with raw materials. As in the past, considerable funds and material-technical resources will be allocated under the 12th Five-Year Plan for the development of agriculture and allied branches. Five hundred thousand hectares of irrigated land will be put into operation and used as guaranteed corn production zones. There will be a substantial intensification of the effort to develop and introduce into production new, highly productive strains and hybrids of crops that meet the demands of intensive technologies, that are resistant to adverse environmental conditions, and that are suitable for mechanized harvesting. Crop yield and the productivity of livestock and poultry will be raised on this basis.

All our concrete actions, all our plans boil down to one thing--the growth of society's wealth and the improvement of the well-being of the Soviet family. Under the current five-year plan, the living standard will be raised to a qualitatively new level. The structure of consumption of material, social and cultural benefits will be such as to create conditions for the most complete disclosure of the abilities, gifts and talents of people in the interests of society.

Real per capita income will grow by 13 percent and the wages of blue- and white-collar workers and labor remuneration of kolkhoz farmers will also rise. Social consumption funds will play a more prominent role. A number of statewide measures will be implemented to raise wage rates and salaries, to expand assistance to families with children and to newlyweds, to improve women's working and everyday conditions, to improve old age pensions, and to increase benefits for war and labor veterans.

The solution of questions relating to the improvement of the well-being of the people is in large measure dependent on the consistent implementation of tasks indicated in the Comprehensive Program for the Development of Consumer Goods Production and the Service Sphere.

Between 1986 and 1990, there will be a 1.2-fold increase in consumer goods production, substantial improvement in their quality, and expansion of their mix. The aid of all enterprises located in the republic, irrespective of their departmental subordination and specialization, will be enlisted in the realization of this task. There will be an increase in the production of highly popular products of light industry, local industry, and the wood processing industry and many cultural, recreational and household products,

including technically sophisticated products that are distinguished by the novelty of their function, reliability, efficiency, and their improved consumer and esthetic properties.

Trade, which has great potential for influencing the mix and quality of products, is assigned a prominent role in securing the more and more complete satisfaction of the population's needs for commodities. The current five-year plan calls for increasing retail trade in the Ukrainian SSR almost 1.2-fold. At the same time, there will be consistent improvement in the system of state retail prices; there will be economically and socially substantiated price levels for various groups of commodities; and prices on individual commodities will be lowered as the necessary commodity and financial resources are accumulated.

The sphere of consumer services will be expanded and their quality will be improved. An important place here belongs to the system of consumer services, whose sales volume will increase 1.4-fold. There will be accelerated growth in the volume of repair and nonindustrial types of services, particularly in the repair of sophisticated household appliances, and in the repair and construction of housing, gardening sheds, and garages.

The fulfillment of a broad program for the construction of housing, municipal service facilities, and sociocultural institutions will continue. Unlike past years, associations and enterprises that have the right to use funds for sociocultural measures and housing construction for these purposes will have greater opportunity to implement this program.

During the 5-year period, the republic will put more than 80 million m² of housing into operation. Particular attention is devoted to improving the layout, amenities and engineering of housing. The volume of cooperative construction will be expanded.

New steps will be taken in the development of municipal services. New heat and water supply facilities, intracity transport facilities, overpasses, and bypasses are scheduled to be put into operation. The gas supply, amenities and sanitary state of population centers will be improved. In the face of limited water resources, a complex of measures will be implemented to ensure the economical and rational expenditure of potable water, inter alia, to reduce its expenditure for production needs and to lower its nonproductive expenditure in external and home water supply systems. Work to halt the discharge of raw sewage into the Black and Azov Sea basins will undergo further development.

Improvements in public education will raise the quality of youth education, promote the ideological-political, moral, and esthetic education of youth, and will better prepare youth for an independent working career. The implementation of general education and vocational school reform measures will continue. During the five-year plan period, the republic will for the most part resolve the problem of providing children with preschool institutions. It is planned to introduce effective methods and special forms of education widely in training specialists with higher and secondary specialized education. The material-technical base of culture will be expanded and

strengthened thereby making it possible to satisfy people's nonmaterial needs more completely.

Much remains to be done to strengthen the population's health. It is planned to emphasize the preventive aspect of public health, to improve the quality of medical care, and to make the gradual transition to yearly prophylactic medical examinations. The network of therapeutic-prophylactic and sanatorium-health resort institutions, specialized hospitals, polyclinics, and therapeutic-diagnostic departments will be expanded accordingly and health care institutions will be better supplied with drugs, sophisticated diagnostic and therapeutic equipment, and medical technology. The fight against drunkenness and alcoholism and other habits harmful to human health will undergo further development. A higher degree of mass involvement in physical culture and sport will promote this program in no small measure.

Our plans are the plans of peaceful, creative labor, of peaceloving policies that enjoy the support of working people on all continents. In order to implement these plans, it is very important that enterprises, building sites, organizations, kolkhozes, and sovkhozes create conditions for highly productive, highly effective work. After all, in the years ahead, the Soviet people will have to make the same massive breakthrough in the intensification of the national economy and in the acceleration of scientific-technical progress as during the height of the Stakhanovite movement, but on a much larger scale, and must realize the grandiose task of improving developed socialist society indicated in the documents of the forthcoming 27th Congress.

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RESOURCE UTILIZATION AND SUPPLY

MATERIAL RESOURCES CONSERVATION DRIVE CONTINUES NATIONWIDE

Roundtable Discussion

Moscow KHOZYAYSTVO I PRAVO in Russian No 10, Oct 85 pp 8-18

[Roundtable discussion with various Gosplan officials and others (all listed below) conducted by A. Sitnikov, scientific editor of KHOZYAYSTVO I PRAVO, under the rubric "Let's Preserve National Wealth": "Economize in Large and Small Things"]

[Text] The roundtable meeting held in the editorial office of the journal was devoted to the topic "Legal Questions of Conserving Material Resources." Taking part in it were A.N. Lebed -- deputy chairman of USSR Gosplan and member of the editorial collegium of the journal KHOZYAYSTVO I PRAVO; V.B. Vasilyev -- chief of the USSR Gosplan Soyuzglavmetal inspectorate for monitoring the use and storage of metal products; V.P. Yefimov -- deputy director of the USSR Gosplan Scientific Research Institute of Economics and Organizations of Material-Technical Supply, scientific secretary of the Interdepartmental Commission on the Conservation and Rational Use of Material Resources, chairman of the All-Union Council of Scientific and Technical Societies Committee on the Conservation and Rational Use of Material Resources, and doctor of economic sciences; Z.M. Zamengof -- senior scientific associate of the USSR Academy of Sciences Institute of Government and Law and doctor of juridical sciences; M.I. Kiselev -- first deputy chief of the Moscow Main Territorial Administration of USSR Gosplan; B.A. Kogan -- deputy general director of the Moscow Plant imeni Vladimir Ilich Production Association; E.A. Kozlov -- chief of the secondary resources administration of USSR Gosplan; Ye.G. Orlov -- chief of the technical administration of the Ministry of Electrical Equipment Industry and doctor of technical sciences; S.Ya. Panov -- deputy chief of the administration of legal work in the national economy of the USSR Ministry of Justice; V.I. Simonov -- deputy department chief of the USSR State Arbitration Committee; A.V. Tolstykh -- deputy chief of the scientific-technical administration of the Ministry of Instrument Making, Automation Equipment, and Control Systems and candidate of technical sciences; and M.F. Yakovlev -- head of the technical substantiation research department of the Plastik Scientific Production Association and candidate of economic sciences. Among the participants in the meeting were employees of the journal's editorial office.

Editors: The CPSU Central Committee and the Soviet Government attach great importance to the major national economic problem of conserving material resources. A number of normative acts on this issue have been adopted. The goal of our roundtable meeting is to analyze how these documents are being

carried out, what shortcomings there are in this work, and how they must be eliminated.

A.N. Lebed: An enormous amount of material resources, especially fuel, raw materials, and crop and livestock output, is being brought into production today. In order to successfully meet the challenge posed by the Communist Party to increase national economic efficiency, we must make extensive use of resource-conserving technologies and processes, consume raw and processed materials prudently, decrease their waste products, and eliminate losses. All the economy's reserves must be put into operation.

In connection with this, I want above all to talk about setting norms for expending material resources. In front of me is a collection of reports by the USSR Central Statistical Administration on ministries and departments fulfilling assignments to conserve material resources taking into account socialist obligations. Let us turn to one of the lines of the Minnefteprom [Ministry of Petroleum Industry] report. It shows that 5.8 times more cement and 43 times more lumber than the amounts established by the assignments were conserved in 1981.

Another report is for the USSR Minneftekhimprom [Ministry of Petroleum Refining and Petrochemical Industry]. It turns out that in 1981 the ministry conserved 62 times more lumber than its assignment demanded; in 1982 4 times the conservation assignment was accomplished; in 1983 -- 6.2 times, and in 1984 -- 8.4 times.

Several other reports are approximately the same. What does this data indicate?

First of all, we still have quite a few "mastak's" ["hotshots"], which is the name given by Comrade M.S. Gorbachev during a speech at the meeting of the Leningrad Party Organization aktiv to those economic planners who try to get hold of a few extra resources, create imaginary savings, and through this join the ranks of the heroes, so to speak. But what is heroic about an economic planner at first accumulating a lot of resources and then showing a savings which exceeds the assignment by 62 times? It is absurd.

Editors: But why is such a resource savings, exceeding the assignment several-fold and possibly up to 10-fold, formed in certain places, in particular the USSR Minnefteprom and Minneftekhimprom?

A.N. Lebed: Because certain ministries authorize resource expenditure norms for subdepartmental associations and enterprises which are too high and neither substantiated nor justified...

Ye.G. Orlov: I will tell how work on conservation is organized in the electrical equipment industry. From 1980 through 1984 the increase in production of commodity output in the sector rose by 15.8 percent, while the use of rolled ferrous metal products during this period declined by 15.5 percent. The expenditure of rolled copper and brass products and other resources is declining. This is the result of the comprehensive system existing in the sector for conserving material resources. Scientific methods

centers -- scientific research institutes and the design bureaus in all-Union industrial associations which interact with the All-Union Scientific Research Institute of Electrical Standards, which is directly subordinate to the ministry's technical administration, formulate this system. They review and authorize norms for consuming material resources and organizational-technical measures to reduce norms. The system for formulating norms is constructed, as they say, on the vertical and encompasses enterprises, all-Union production associations, and ministries and is contained in USSR Gosplan. The authorization and approval of norms also occurs on the vertical but only in the reverse sense, beginning from USSR Gosplan.

M.I. Kiselev: This procedure for developing and authorizing expenditure norms also exists in many other ministries. Nonetheless, it is used only during the production of USSR Gosplan products list output. But during the production of USSR Gosplan products list output the norms for expending resources are determined and authorized by territorial organs of material-technical supply. And, frankly speaking, there is no scientifically-substantiated approach to this matter since there are no technologists able to competently determine the norms for expending resources and monitor how they are being fulfilled there. It would therefore be expedient for ministries to formulate and authorize norms for all output produced regardless of which products list it belongs to. This would help increase ministries' and enterprises' responsibility for conserving material resources.

Ye.G. Orlov: According to the established procedure, norms for expending material resources being developed for 1986, for example, are based on the decrease in use in 1984. But isn't the interval too great? We think it is too great. It does not give us an opportunity to effectively influence the conservation of resources used by the sector.

Norms are not set for expending materials in the production of all items. And we do not yet have an agreement with USSR Gosplan on how to set norms for these items on expending material resources and how to single them out. We need clarification on this issue. It is difficult to conserve raw and processed materials without it. We need instructions from USSR Gosplan.

M.F. Yakovlev: Our ministry is the head ministry for processing synthetic resin and plastic. It formulates and authorizes norms of their expenditure, coordinating these norms with USSR Gosplan and USSR Gosplan. Their use enables resins and plastics to be conserved. In the 11th Five-Year Plan conservation of resins and plastics will total about 16 million rubles.

Synthetic resins and plastics are processed at enterprises of more than 130 ministries and departments. They have approximately the same equipment to do this as enterprises of chemical industry. The only difference is in type-sizes. And it would be completely possible to use norms of expenditure worked out in the Minkhimprom [Ministry of Chemical Industry].

However, our norms are not compulsory for other ministries and departments. We are not achieving the proper savings. The state is carrying the loss. How can it be eliminated?

The question is an intersectorial one. It can be solved. In order to do this we think it is necessary for USSR Gosplan and USSR Gossnab to adopt an appropriate joint decree. USSR Gossnab supports us. It's up to USSR Gosplan and we hope that it will support us too. As a result of introducing progressive norms, conservation of synthetic resins and plastics will be many times greater than is now planned. We have no doubt that it will substantially exceed the currently envisioned amount of savings by 25 million rubles.

Ye.G. Orlov: I will add this. The assignment for reducing material norms is established for the five-year plan period. But at present it does not cost Gosplan or the ministry anything to make the appropriate adjustments if they see that the enterprise has done well in the first year of the five-year plan. Unfortunately, this still happens quite often. As a result, the progressive enterprise in such cases immediately finds itself lagging. This system does not encourage it to do a good job and give the maximum yield. The principle operating here is: Don't stand out. Be ordinary and everything will be fine. It must be legally established that genuinely stable norms must be authorized for the five-year plan. If the enterprise has conserved a great deal -- good work and that's fine. It must be given an incentive to do so rather than punished by adjusting the plan assignment.

V.P. Yefimov: The current mechanism for managing the conservation of material resources mainly through assignments for average reduction in grouped expenditure norms is inefficient. Primarily because the ministries that establish the norms have an interest in making them too high. Moreover, it is well known that the norms established must go down; since the rate of decline in the norms is not correlated with real capital investments, naturally it is simpler to report an arbitrary reduction of overstated norms. It is precisely for this reason that for years the technical level of many sectors has not risen, even though the individual norms of expenditure are steadily declining according to statistical reporting.

But what is happening in fact? When certain expenditure norms become "a little constricting," the enterprise, association, or ministry announces that they are converting to producing new output. And if the output is new then the norm must also be new. But on inspection it turns out that the same item is being produced, although with a few changes.

Z.M. Zamengof: Until now we have not had a clearly enough established procedure for formulating and authorizing norms and standards. In formulating the rights of these organs in this area, the statutes on different economic organs (enterprises, associations, and ministries) do not really resolve the question but only contain norms that refer to the enactments which are supposed to resolve it subsequently. The "System of Norms and Standards" approved by USSR Gosplan on 11 January 1980 did not clarify the issue either. Legislation has not defined the legal force of the established norms and standards and the degree to which they are binding for planning and economic organs, a legal mechanism for using them has not been worked out, and guarantees for their proper use have not been envisioned. All this impedes the real introduction of norms and standards into planning and stimulation practices.

Editors: We also lose a rather large amount of output as a result of various types of departmental lack of coordination, the production of low quality output, and at times simply from mismanagement. This must be mentioned.

A.N. Lebed: I will only cite one case. The Kazakh SSR complains of underdeliveries of lumber. In fact this has occurred. USSR Gossnab was justifiably criticized for it. Inasmuch as Kazakhstan is an unforested region we understand how valuable the wood supplied to it is for the republic's economy and we take measures to prevent breakdowns in delivery.

But how is it used in Kazakhstan? Poorly, wastefully. Every year 1.9 million cubic meters of lumber become waste products in the republic. And these waste products are a splendid raw material for producing fiberboard, chipboard, wood-cement and gypsum-cement sheeting, and a number of other types of wood substitutes. If Kazakhstan handles this raw material prudently, waste products would be put to use too, rather than put into rubbish heaps and dumps. The state would not have to bring in a minimum of half a million cubic meters of commercial timber.

Unfortunately, an imprudent, wasteful attitude toward lumber is not characteristic of the Kazakh SSR alone. Every year more than 300 million cubic meters of commercial timber are procured in the country. Of that 100-120 million cubic meters goes to waste. Some people apparently believe that the country is very rich in wood and therefore it can be used wastefully. This opinion, which is found in some places, that not only wood but also many other resources are inexhaustible is very harmful. Such dependent psychology engenders indifference to conservation issues.

B.A. Kogan: A wasteful attitude not only appears toward wood but also toward metal. The metallurgy industry is not yet in a position to satisfy the demands of all consumers for the assorted metals. We order one type but the metallurgists roll another for us and we take it: you still don't get what you need. This means that waste is inevitable -- it is built in in advance. But how much metal would be saved if we got the necessary semifinished pieces!

USSR Gossnab must build and develop its own enterprises to prepare metal for production. We could give them our own funds for metal and they could deliver metal which has been prepared for production to consumers on a centralized basis. And one more proposal: enterprises to collect, clean up, and send to suppliers packaging returned from consumers must be built in the USSR Gossnab system. Building them is an important way to conserve metal, packaging, and other material resources.

Editors: How is legislation on material incentive to conserve resources being applied?

M.I. Kiselev: The norms stated in the USSR Council of Ministers decree of 10 May 1982 No 386 on awarding bonuses for conserving material resources are almost never used in practice. Incentive to conserve material resources envisioned by the Statute on the Formation and Use of Economic Incentive Fund

Capital for Enterprises Participating in the Economic Experiment has also proven to be insufficiently effective.

V.F. Yefimov: One cannot disagree with that. Surveys conducted by the USSR Central Statistical Administration and USSR Goskomtrud [State Committee for Labor and Social Problems] have shown that rewards for conservation in accordance with USSR Council of Ministers decree of 10 May 1982 No 386 are paid by a small number of enterprises and to a very narrow circle of individuals. There are cases where a certain collective has managed to conserve and has the right to incentive but in fact the bonus is not paid.

Z.M. Zemengof: A uniform approach to solving the main problem -- what types of conservation (conservation as compared to what) should be encouraged -- has not yet been worked out. Thus, normative acts speak of stimulating conservation of material resources as compared to the limit (or planned level) of material expenditures per ruble of output, as compared to plan assignments to reduce the expenditure of material resources, and as compared to properly set expenditure norms. As a result, paradoxical situations arise where an enterprise can be considered at one and the same time a leader or a laggard in terms of the indicator of resource conservation -- depending on which criterion (which "point of reference") is used to determine conservation. Under such an approach it is difficult to expect a significant effect from the incentive system. It seems that if expenditures of social labor which are socially necessary for the level of production achieved (and they should be precisely those technical-economic norms and standards which are scientifically substantiated, as economic theory acknowledges) are included in norms of expenditure, then any assignments to reduce the expenditure of material resources further should in general not be established and incentive should be awarded for conservation as compared to the established norms and standards. Such an approach also stems from the directive of the June conference in the CPSU Central Committee to accelerate scientific-technical progress; it pointed out the need to complete the transition in planning to normative methods when determining expenditures and formulating assignments on efficiency. But a precisely functioning system of norms of expenditure is needed to do this.

Editors: Another very timely issue is extensive use of secondary material resources.

E.A. Kozlov: Our country procures and reprocesses hundreds of thousands and millions of tons of secondary resources. Thus, this year the plan for using waste paper in the economy totals 2.9 million tons, broken glass -- 700,000 tons, and polymers -- 208.5 million tons. Yet dissatisfaction is expressed at how we use secondary resources. And this is correct.

The CPSU Central Committee has been devoting steady attention to this problem in all recent years. In December of last year it adopted a special decree on the unsatisfactory state of affairs with the use of secondary resources.¹

Many types of secondary resources are formed in some sectors of the national economy but can be used in other sectors. An intersectorial problem arises.

In the developed countries in practice, local governmental agencies head attempts to solve the problem of the use of secondary resources which are formed in their region. For us these local organs are the Soviets of People's Deputies. Because they actually can actively influence this process.

Unfortunately, not all of them understand this. Recently I had occasion to speak on this issue to the managers of planning commissions of the local Soviets of a number of krays and oblasts. The response I heard there was that the use of secondary resources is a USSR Gossnab affair; they said, let them take care of it, we have many other concerns. A wrong opinion. When local Soviets do not face the problem of secondary resources, we will spend a long time trying to solve it and who knows if we will. This is the first point.

And the second point. The principle incorporated into the statute on the ministry should operate: the ministry to which an enterprise is subordinate is responsible for using the waste products formed at the enterprise. This principle operates in many countries and in all of the socialist countries. The GDR, for example. When ashes and slag are formed at thermal power plants, the republic's minister of coal and energy is responsible for using them.

A.N. Lebed: The USSR Council of Ministers decree No 65 of 25 January 1980 entitled "On Measures to Further Improve the Use of Secondary Raw Materials in the National Economy" and other normative acts did not establish such a procedure. In your opinion, are any additional normative acts needed?

E.A. Kozlov: Proposals for a law on secondary resources are now being prepared. A working group created from representatives of USSR Gosplan, USSR Gossnab, USSR GKNT [State Committee for Science and Technology], and the USSR Ministry of Justice is preparing it. All this should obviously be stated in the law.

B.A. Kogan: And what will the law be like?

E.A. Kozlov: First of all, the law must establish responsibility for using secondary resources. This is nothing new. Such responsibility has been established in similar laws of certain other states. For example, for destroying waste products, for mixing them or converting them into degraded waste, and a number of other things.

B.A. Kogan: In our country people collect paper but turning it in is very difficult. And so this collected paper lies for years and becomes unusable. So people think, why do I bother to collect paper?

A.N. Lebed: I must object. This is the old waste paper issue. USSR Gossnab has built and operates two enterprises with a capacity of 420,000 tons for reprocessing -- in Leningrad and Kiev. This is the second year that it has been producing cardboard. This has enabled the state to reduce its purchases in foreign currency to two-fifths the former amount. By 1987 construction of several more such enterprises will be complete. But even so we now have another 160,000 tons of unused cardboard. Why? Because the ministries and departments, specifically the USSR Minlesbumprom [Ministry of Timber, Pulp and Paper, and Wood Processing Industry], Minkhimprom [Ministry of Chemical

Industry], Minpishcheprom [Ministry of Food Industry], Minmyasomolprom [Ministry of Meat and Dairy Industry], and Minrybkhoz [Ministry of Fish Industry] which were supposed to build their own reprocessing capacities promptly have not done so. A commission is now being set up to investigate who is specifically at fault in this matter so that they can be held responsible.

I will cite one more such case. In Moscow the USSR Minlesbumprom is building an enterprise to produce cardboard boxes. Eleven years have passed since construction began, the 12th year is passing, and it is still not apparent when it will be finished.

And we have people with initiative. They are everywhere. In the city of Ordzhonikidze. The general director of the Sevostintara Association, Kh.M. Koloyev came to us at USSR Gosstab and said: "Our demand for cardboard packaging will be large. We want to build an enterprise to produce it." We asked him: "How will you build it?" He answered: "By the in-house method; you just give us the equipment." His request was fulfilled and within 2.5 years, using the plan by which the enterprise in Moscow has been under construction for 11 years, he built the factory in Ordzhonikidze and in half a year he brought it up to 100-percent capacity. And the other day he again came to Moscow. He said: "I will build a second phase in half a year, only guarantee that equipment will be delivered to me on time." That is desire and aspiration! And stricter demands on people who do not want to do the work properly are also certainly necessary. I imagine the law should play its positive role.

Editors: The real way to reduce losses is to increase output quality and intensify the struggle against the production and delivery of low-quality output.

A.N. Lebed: Sales to the population of summer garden sheds has substantially increased; they are in great demand today. Recently in the Leningrad and Moscow oblasts USSR Gosstandart [State Committee for Standards] checked the quality of sheds supplied from enterprises of the USSR Minlesbumprom and the RSFSR Ministry of Local Industry on lumber business bases. It turned out that almost all of them were defective or incomplete.

Gosstandart has banned the sale of defective output. This means a large amount of wood and energy has been consumed in vain. Labor has been expended for nothing. The state has been harmed. Citizens' expectations were not met. And the bad workmen have not yet been punished.

A.V. Tolstykh: The time has come to tighten up accountability for producing defective output. Demands on related industries which at times supply their economic partners with poor-quality materials and assembly components must be raised. We lose quite a large amount of ready-made output because of this: defects in assembly components often can only be detected at the end. I say this without forgetting that we also act as suppliers of assembly components for other enterprises and sectors.

V.I. Simonov: When they hear disputes, state arbitration organs identify many cases of the delivery of improper quality output as well as defects. The enterprises guilty of this are held legally responsible. Moreover, Gosarbitrazh [State Arbitration Commission] is reporting on violations tolerated in higher-ranking organizations or other organs so that measures may be taken to eliminate them and the damage done can be compensated. It is important here that the guilty workers are brought to responsibility for such violations.

Editors: Obviously, in some places the opportunities for economic agreements are not being taken advantage of in work to conserve resources.

V.I. Simonov: That is frequently so. Analysis of the content of many agreements shows that they often do not contain conditions aimed at rational consumption of raw and processed materials, fuel, and energy and fundamentally higher quality in output and goods delivered. Frequently the agreements include conditions which do not conform to existing applicable law, restrict the rights of the parties, and sometimes allow them to avoid responsibility for underfulfillment of obligations.

Other consumers, taking advantage of their primary right to reject allocated output partially or completely, often put the supplier in a difficult position.

Recently I had occasion to visit the Krasnodar Worsted Wool Combine, which is a member of the Rospromsherst Association of the RSFSR Ministry of Textile Industry. The combine produces woolen fabrics. However, certain consumers reject part of the fabric ordered, sometimes for no reason. And as a result the combine has accumulated hundreds of thousands of meters of fabric for whose production the most valuable raw materials were used. Obviously, legal responsibility for unsubstantiated orders and subsequent rejections for this reason should be established.

The fact must also be noted that a volume of production which substantially exceeds the plan for deliveries is being ratified for this combine. It looks like this is done so that the combine's collective works in vain: the output it produces lies untouched in its own warehouses. How can you speak of conservation here!

Z.M. Zamengof: Well-known decrees of the party and government envision, in particular, increasing consumers' role in formulating production plans for manufacturing enterprises (CPSU Central Committee and USSR Council of Ministers decree No 695 of 12 July 1979 and No 659 of 14 July 1983). Nonetheless, it is impossible to completely fulfill this demand because of the absence of the necessary legal mechanism. For example, norms on formulating annual plans on the basis of economic agreements are not correlated with the current system of planning under which economic ties for the year are established and agreements concluded after the production plans have been ratified; as a result, the agreements cannot be taken into account when formulating the production program. There is no mechanism for linking up directive plan assignments on value indicators with the plan's natural indicators determined by the enterprises themselves on the basis of agreements

concluded. As a result, value indicators prevail over natural indicators, which in a number of cases is an insurmountable obstacle to manufacturing enterprises' accepting the substantiated demands of purchasers by assortment (products list) of output delivered and to effectively reorganizing the program with consideration for changed consumer demand.

B.A. Kogan: Problems of exchanging material resources between enterprises bother us, the producers. The exchange procedure must be simplified by granting enterprise managers more independence when carrying out these operations.

V.P. Yefimov: The experiment being conducted in the country to expand the economic independence of enterprises and increase their responsibility for final results logically leads to the need to eliminate excessive regimentation in the use of material resources. At the same time responsibility must also be increased for determining requirements, for accumulating above-norm material resources, and for violating delivery contracts. It should be stressed in this connection that we need unconditional rather than conditional cost accounting here; that is, each manager, each labor collective, and each sector must be fully accountable for a negative result.

Z.M. Zamengof: It would be expedient to change the fundamental approach to determining the managing jurisdiction of enterprises. At the present time this is determined through a detailed listing of the rights granted according to the following principle: enterprises may only perform those legal operations which are directly permitted by law; everything that is not directly permitted is considered prohibited. This constrains enterprises' independence.

A different method for determining enterprise jurisdiction has been proposed by juridical science; it is based on the principle by which enterprises may perform any legal operations necessary to carry out their economic activity and fulfill social functions, with the exception of operations which are directly prohibited by law or within the jurisdiction of higher-ranking and other organs of economic management.

V.P. Yefimov: It is now necessary to rescind a large number of decrees adopted on the issues of resource conservation and, on the basis of codifying them, prepare a USSR Law on Rational Use of Material Resources in the National Economy and in Daily Life.

In our opinion, this unified document would place a legal footing under resource conservation activities themselves. The principle on which this law should be based is: everything is prohibited that impairs the use of material resources and, in contrast, everything is permitted that leads to their more efficient use.

The goal of such a law is not to classify ways to achieve savings (all of them cannot be listed), but rather to be the fundamental document which insures conservation through rationalizing the use of production resources.

The USSR Council of Ministers decree from 4 May 1984 on material responsibility for irrational use of resources is now in effect. Nonetheless, it is essential that accountability to some degree involve economic incentive funds and the wage fund. Material responsibility must be both collective and individual.

The development of the USSR Law on Rational Use of Material Resources makes it possible to confirm on a legal basis norms which have been in operation for a long time by creating stable conditions of material resource use for 5-10 years. In our opinion, it would be much more efficient to ratify a five-year standard of use efficiency for material resources rather than ratifying assignments on the average reduction of one-time ratified expenditure norms. In particular, it would be expedient to affirm in a law the rule that a new item can be launched into production if its materials-intensiveness is lower than the preceding model's, let us say, by 15-30 percent and lower than the best foreign analogues by 10-15 percent. This would restrict the senseless replacement of certain items with other ones when on paper technical progress is noted but the materials-intensiveness of production essentially remains unchanged. The provisions of the law should be advantageous to both the state and the enterprise. Superfluous expenditure of material resources should be severely punished.

Z.M. Zamengof: A comprehensive "inventory" of all legal norms in any way related to the problem being examined and comprehensive treatment of them are now needed to develop a uniform system of interrelated and internally agreed-upon norms which as a group would create a stable legal foundation for the conservation activities of economic organs. In this connection it is relevant to recall that at the June conference at the CPSU Central Committee a comprehensive approach to meeting the challenges outlined was viewed as a necessary condition of success. This also fully pertains to working out legal forms of economic activity.

S.Ya. Panov: We are losing a great deal in connection with the fact that legislation on the conservation and rational use of material resources is not being observed. To a certain degree ignorance of the demands of normative acts accounts for this.

Who is to blame for this? It seems that juridical services which are charged with organizing systematic accounting and storage of normative acts which come to enterprises and which they publish should accept part of the responsibility. But this service should give information on current legislation and with other subdivisions organize study by responsible persons of normative acts which relate to their activity.

But how about places where there are no juridical services? After all, today two-thirds of the enterprises are compelled to do without them. It seems that juridical divisions of ministries and departments which are supposed to organize this work in the sector as a whole should step in here. Incidentally, there are examples to follow. The Mintyazhmash [Ministry of Heavy and Transport Machine Building] and the Minmash [Ministry of Machine Building], for example, have for a long time already been practicing centralized distribution of index cards for the card file of normative acts

which is kept at subordinate enterprises and organizations. It would not be a bad idea to disseminate existing experience.

Collections of departmental normative acts are very helpful in the work of enterprises and organizations to apply the law. Unfortunately, in recent years attention to them on the part of ministries and departments has weakened and in certain sectors they have not been updated for a long time.

Jurists should give assistance to economic specialists in utilizing legal means whose application insures a high level of organizational work to conserve material resources and conduct classes and legal indoctrination work in labor collectives on issues related to giving incentive to workers and employees for conservation, as well as explain these persons' responsibility for the overexpenditure of material resources. Along with other services it should identify and eliminate the causes and conditions which generate cases of misappropriations, waste, and squandering of state property and deliveries of low-quality, incomplete output.

Recently in certain ministries, among them USSR Mingazprom [Ministry of Gas Industry] and Minselkhoz [Ministry of Agriculture], employees of the USSR Ministry of Justice familiarized themselves with the organization of work to keep departmental normative acts in order. The participants in the familiarization saw that although efforts are also being made in this matter, nonetheless... A number of acts are outdated and need to be revised, orders and instructions issued earlier on the issues of conservation have not been systematized, statutes and official instructions do not provide clear legal regulation of obligations on intensifying the struggle for conservation or provide none at all, the procedure for writing off material valuables is being violated, and so forth and so on. The conclusion from this is that economic managers underestimate legal means; this is a result of their poor legal training and lack of necessary experience in utilizing legal levers. Comprehensive sectorial and local measures to conserve and rationally use material resources as a rule do not envision legal questions and the participation of legal consultants in this work.

Why when there is output and a contract for delivery does the output not always reach the consumers? It may be because there are suppliers who interpret conservation conditions in very unusual ways. I will conserve at the expense of the partner in order to take a little more for myself or I will hand over the output without a contract in order to take some altogether different output for myself in exchange. The consumer who does not get the full amount of the output due him one time, draws certain conclusions and then next time orders extra for a reserve. And the next thing you know, another newly-fledged peddler is strutting around offering to sell goods put away for a rainy day to any who want them. This leads to serious consequences since it threatens the foundations of our socialist economy -- its planned basis.

It is relevant to mention here a comparatively new legal form, arising from practice, of economic ties between territorial organs of the USSR Gosplan system and the enterprises they serve -- the agreement to organize material-technical supply. All the conditions of this agreement are essentially subordinate to one thing: prudent expenditure and preservation of commodity-

material valuables. Nonetheless, one rarely hears about these agreements in ministries and departments and at times legal departments do not have a good idea of them. The practice of their application is not generalized and they are being realized much too slowly.

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Important questions were posed and critical comments and proposals were made during the roundtable discussion. It is possible that everything said is not indisputable. Nonetheless, considering the urgency of the problems dealt with, the editorial office hopes that the USSR Minnefteprom, Minkhimprom, Minneftekhimprom, Minlesbumprom, Minmyasomolprom, Minpishcheprom, and Minrybkhhoz will carefully study the critical remarks addressed to them during the roundtable discussion and make the appropriate decisions regarding them.

I would like to hope that the exchange of opinions which took place will be useful to employees of other ministries, departments, associations, and enterprises as well as to employees of ispolkoms of local Soviets of People's Deputies, since their activities are focused on increasing the efficiency of economic activity, and this can be achieved only by conserving and rationally using material resources.

FOOTNOTE

1. PRAVDA, 8 December 1984.

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Planning Refinements Needed

Moscow PLANOVoye KHOZYAYSTVO in Russian No 11, Nov 85 pp 85-89

[Article by B. Kellerman, deputy chief of the financial administration of the USSR Ministry of Construction Materials Industry, and L. Osipovich, docent of the Moscow Institute of Management imeni Ordzhonikidze, under the rubric "National Economic Reserves": "Planning on Material Resources Involvement in Economic Circulation"; passages enclosed in slantlines printed in boldface]

[Text] Observing strict conservation policies on material expenditures in production based on reducing the materials-intensiveness of output, incorporating new, more economical types of output, improving existing and introducing low-waste and no-waste technologies, and using progressive technical-economical norms and standards are important elements of insuring intensive development of the national economy.

The conference at the CPSU Central Committee on accelerating scientific-technical progress noted: "The main thing now is to mobilize organizational, economic, and social factors, establish order, increase responsibility and discipline, and improve the organization of production and labor in order to insure better use of everything the country has at its disposal."¹ In recent years quite a lot has been accomplished to insure conservation of material

resources in the national economy. USSR ministries and departments and the Union republic Councils of Ministers established 11th Five-Year Plan assignments to accelerate the turnover rate of working capital and bring above-norm and unused commodity stocks into economic circulation. Beginning in 1983 limits for material expenditures per ruble of commodity output were set in assignments on prime cost. Corresponding changes have been introduced in recordkeeping and reporting as well as in the methodology for calculating the assignments being established. Economic stimulation of enterprise collectives to conserve material resources and reduce material expenditures has been instituted.

Nonetheless, some normative documents do not permit objective evaluation of enterprise activities aimed at saving material resources. Specifically, this applies to practices in planning and writing reports on the fulfillment of assignments to accelerate the turnover rate of working capital and bring material resources into economic circulation.

Before the 11th Five-Year Plan the turnover rate of working capital in days was calculated based on the /average/ balances of their norm-controlled part and the /volume of one-day realization/ of commodity output at wholesale (transfer) prices. This procedure insured the comparability of the data on turnover rate in days and changes in it during the report period. At the same time, because of the incomparability of evaluations (balance of norm-controlled working capital as an element of production expenditures while realization is a derivative of prices), the absolute values of turnover rate in days and the sum of involvement (withdrawal) of resources into economic circulation were conditional in nature.

Beginning with the 11th Five-Year Plan, the planning of assignments in this area has been done taking into account balances of norm-controlled working capital /at the end of the planning period/ and /of the one-day planned prime cost/ of commodity output in that period. The procedure for compiling reports on turnover rate of working capital (for actual prime cost and actual stocks at the end of the year) and on the fulfillment of assignments to draw material resources into economic circulation was also changed. The absolute values of turnover rate of capital in days and involvement of material resources in economic circulation thereby acquired a uniform evaluation. Nonetheless, because the prime cost of commodity output is subject to the influence of a large number of factors, these indicators are only with difficulty comparable with the plan and report for the preceding period.

A fundamental shortcoming of the current procedure for calculating the fulfillment of assignments on involvement in economic circulation and the turnover rate of working capital is the nonconformity in the temporal evaluation of basic data -- one-day expenditures are determined by dividing the expenditures for production during the report period by the number of days in the report period (quarter, half year, year) while the balances of norm-controlled working capital are taken at the end of the report period.

Let us examine the calculation of the turnover rate of working capital and involvement of material resources in economic circulation using the example of one of the enterprises (see table).

a) (в тыс. руб.)

b) Показатель	c) За 1980 г. в условиях планового года			d) По плану на отчетный год (нарастающим итогом с начала пятилетия)			e) Фактически			
	f) по дейст- вующей методике	g) по средне- годовым запасам	h) по данным за декабрь	f) по дейст- вующей методике	g) по средне- годовым запасам	h) по данным за декабрь	f) по дейст- вующей методике	i) исходя из плановой се- бестоимости на фактиче- ский выпуск	j) исходя из среднегодовой запасов нормир. оборотных средств	k) исходя из себестоимости за декабрь
1	2	3	4	5	6	7	8	9	10	11
1) Себестоимость товарной про- дукции	-	-	-	26 438	26 438	2 406	26 411*	27 191*	27 191	2 590
м) Однодневные затраты . . .	-	-	-	73,44	73,44	80,27	73,36	75,53	75,53	86,33
п) Остатки нормируемых обо- ротных средств	5 849	5 765	5 861	5 717	5 633	5 717	5 880	5 880	5 807	5 880
о) Оборачиваемость в днях . .	79,69	78,5	73,02	77,85	76,7	71,22	80,15	77,85	76,88	68,11
р) Вовлечение средств в хозяй- ственный оборот путем ус- корения оборачиваемости или отвлечения их из-за замедления оборачиваемо- сти	-	-	-	-	-	-	-	-	-	-
q) в днях	-	-	-	1,8	1,8	1,8	-0,5	1,8	1,62	4,91
г) в сумме	-	-	-	132	132	144	-37	136	122	424
с) Справочно:										
т) Товарная продукция в оп- товых ценах	-	-	-	31 662	31 662	2 689	32 580	32 580	32 580	2 900
у) Затраты на 1 руб. товарной продукции (в коп.)	-	-	-	83,50	83,50	89,47	81,07	83,46	83,46	89,31

* Предприятие добилось сверхплановой экономии по себестоимости товарной продукции в сумме 780 тыс. руб., или 2,95%.

Key:

- a) In thousands of rubles
- b) Indicator
- c) For 1980 in conditions of the plan year
- d) According to the plan for the report year (running total from the start of the five-year plan)
- e) In fact
- f) By the current method
- g) By average annual stocks
- h) By data for December
- i) Based on the planned prime cost for actual production
- j) Based on average annual stocks of norm-controlled working capital
- k) Based on prime cost for December
- l) Prime cost of commodity output
- m) One-day expenditures
- n) Balances of norm-controlled working capital
- o) Turnover rate in days
- p) Involvement of capital in economic turnover by accelerating the turn-
over rate or withdrawal of capital because of a slower turnover rate
- q) In days
- r) In total
- s) Information
- t) Commodity output in wholesale prices
- u) Expenditures per ruble of commodity output (in kopecks)

* The enterprise achieved above-plan savings of 780,000 rubles or 2.95 percent on prime cost of commodity output.

As is apparent from the example cited, when different methodologies of calculation are used, the turnover rate in days and the sum of involvement (withdrawal) of working capital can fluctuate by a substantial amount.

From the data calculated according to the method established by the instructions of the USSR Ministry of Finances and the USSR Central Statistical Administration (columns 2, 5, and 8), it is apparent that rather than the assigned acceleration of turnover rate by 1.8 days and involvement of 132,000 rubles worth of material resources in economic circulation, the enterprise in fact allowed a slowdown of 0.5 days in turnover rate and withdrew 37,000 rubles worth of capital from circulation. On the basis of the calculation, it may be concluded that the enterprise did poor work since its increase in stocks substantially outstrips the increase in expenditures for production. But this would be a formalistic approach.

Analysis of the causes of the underfulfillment of the assignment shows that as a result of the work carried out the enterprise achieved an above-plan reduction of prime cost of output of 780,000 rubles, or 2.95 percent. It is precisely this, that is, savings in resources, which led to a slower turnover rate of working capital and underfulfillment of the established assignment. Therefore, from the standpoint of fulfilling the assignment for involvement in economic circulation (and measures of economic influence are employed for underfulfillment of it), it is more profitable for the enterprise not to achieve savings in prime cost of output, but to maximally increase expenditures for production.

Some may object here that as expenditures for production are reduced, the enterprise's need for stocks of material resources and working capital should also decline. But canceling concluded contracts for delivering material resources in the middle of the year is not always possible and, moreover, threatens the payment of a large penalty. But if it is considered that a reduction in prime cost can be achieved not only through reducing material expenditures but by increasing labor productivity (reducing the proportion of wages per unit of output) and relatively decreasing fixed, overhead, nonproduction, and a number of other expenditures, then it becomes apparent that prime cost is an indicator which is extremely variable for the question under study. After all, in many sectors the level of expenditures for production may even depend on the weather.

Two variants for overcoming this type of difficulty are possible. First, return to the old method of calculating the turnover rate of working capital, based on turnover in enterprise wholesale prices. Secondly, use the calculation by planned prime cost of output, that is, without taking into account the above-plan reduction achieved.

In our opinion, in order to evaluate the fulfillment of assignments to accelerate the turnover rate of working capital and involve material resources in economic circulation, it would be expedient to take expenditures for output actually produced, recomputed according to the planned prime cost of the items. The improper influence of above-plan savings or overexpenditure of production costs (the calculation in columns 2, 5, and 9) will thereby be eliminated. An enterprise which has achieved above-plan savings in prime cost

of commodity output can report fulfillment of the established assignments while one that has permitted an overexpenditure will not have undeserved advantages.

But even this method of calculation still does not reflect the real state of affairs. This is related, as was already discussed above, to nonconformity in the temporal evaluation of the basic data in the calculation -- average one-day expenditures during the report period and one-time balances of norm-controlled working capital at the end of the report period. The balances of norm-controlled working capital on specific dates, as practice shows, are subject to substantial fluctuation. According to the current conditions of supply at individual enterprises, they can substantially rise at the end of the year at some enterprises because of large one-time deliveries of physical assets, an increase in stocks of ready-made output caused by transport difficulties, and the creation of seasonal or targeted (for example, prerepair) stocks or they can be unjustifiably reduced because of underdeliveries of raw and processed materials and for other reasons. Therefore, it would be better, in our opinion, to use average annual balances of norm-controlled working capital in the calculation. Calculation by this method (see columns 3, 6, and 10) shows that the enterprise had a slight (only 10,000 rubles and 0.18 days) underfulfillment of the assignments to accelerate the turnover rate of working capital and to draw material resources into economic circulation.

There is one other way to calculate the turnover rate of working capital and involvement in economic circulation -- begin from average prime cost during December of the report year and the balances of norm-controlled working capital at the end of the year, with an eye to converging the initial data in time. In our example it is cited in columns 4, 7, and 11 of the table. The results of the calculation are unexpected: the assignments on accelerating turnover rate and involvement in economic circulation are overfulfilled by almost three times, which is clearly unrealistic.

Thus, all that was stated above allows one to conclude that the method of planning and evaluating fulfillment of assignments based on the average annual planned prime cost of output and average annual stocks of norm-controlled working capital is the most acceptable and economically sound. Although certain secondary questions arise even when this method is used. Assignments for USSR ministries and departments and for Union republic Councils of Ministers on accelerating the turnover rate of working capital and involving material resources in economic circulation are set by the USSR Government. USSR Gosstat, USSR Gosplan, the USSR Ministry of Finances, and the USSR Central Statistical Administration simultaneously set so-called planned stocks for them /at the end of each year/ of the five-year plan period, which stem from the assignments to accelerate the turnover rate of working capital. When converting to average annual data it would be expedient to plan /average annual/ stocks of norm-controlled working capital for USSR ministries and departments and Union republic Councils of Ministers; this will make it possible to evaluate the state of affairs more objectively. Temporal factors, which were mentioned above, influence the fulfillment of this indicator to a lesser degree.

For certain enterprises the need for norm-controlled working capital may change in the course of the five-year plan period because of a change in the structure of production or conditions of the supply and marketing of output. For example, many enterprises set up subsidiary (rural) units, develop container freight shipping, and are given additional norms of working capital above the amount of increase stemming from the rate of increase in expenditures for production. In connection with this, as practice shows, planned stocks determined according to the current methodology can in certain cases prove to be lower than the established norm of working capital. They should be established at an amount no lower than the current norm of working capital for these enterprises.

When planning assignments to draw material resources into economic circulation, certain difficulties arise for contract construction-installation organizations subordinate to industrial ministries. This is because in the course of a year substantial volumes of construction-installation work are transferred from the economic method to internal contractors and vice-versa, depending on market conditions. In light of this, the volume of constallation-installation work performed by internal contract organizations can change substantially. As a result, in accordance with this type of activity it becomes necessary to repeatedly refine the assignment on drawing material resources into economic circulation and on planned stocks. Nonetheless, USSR Gosstnab, USSR Gosplan, the USSR Ministry of Finances, and the USSR Central Statistical Administration do not carry out these refinements during the year; this makes assignments on involvement of material resources and on planned stocks for contract organizations unrealistic.

Considering that the amount of construction-installation work being performed by internal contract organizations of industrial ministries as well as the amount of work on different types of their nonindustrial activity and the resulting involvement (in the value sense) of material resources in economic circulation are comparatively small, it would be expedient to specify assignments to bring material resources into economic circulation for industrial ministries according to the basic type of their activity, that is, according to the industry. This will make it possible to focus the efforts of ministries on the most important task and increase their responsibility for performing it.

When working out assignments to accelerate turnover rate and draw material resources into economic circulation for the 12th Five-Year Plan and procedures for compiling reports on the fulfillment of these assignments, existing experience should be taken into account. For assignments to be realistic and economically sound, sectorial factors must be considered more fully. These factors are: increase in stocks of means for stacked freight shipping; additional need for working capital to introduce scientific-technical advances, and others. It would also be expedient, beginning with the 12th Five-Year Plan, to simplify statistical reporting on the fulfillment of the plan on prime cost of commodity output (Form 1c) and correlate it with the calculation of the assignment to draw material resources into economic circulation. It is also necessary to further improve economic stimulation of enterprise collectives to conserve material resources and reduce material expenditures.

The assignments to draw material resources into economic circulation set by the USSR ministries and departments for the five-year plans (in running total each year) and planned balances are refined every year by USSR Gosstat, USSR Gosplan, USSR Ministry of Finances, and the USSR Central Statistical Administration (at the start of the year) based on the indicators of annual plans of the economic and social development of the USSR. Subsequent refinements of plan indicators as a rule are not given attention and assignments are not adjusted. As a result, quite a few difficulties arise when compiling reports on the fulfillment of assignments to draw material resources into economic circulation.

When the proposed method of planning is used, it will suffice for USSR ministries and departments to only ratify assignments to accelerate the turnover rate of working capital in days. They themselves can determine assignments on involvement in economic circulation, planned stocks, and data on their fulfillment based on raw plan and report data and specially developed methodologies. These methodologies should give explanations on various situations which arise in the process of economic activity. For example, they should explain exactly how to report on the fulfillment of assignments of newly erected enterprises which were launched during the current five-year plan period and have incorporated planned capacities and how to calculate the amount of planned stocks for them (such enterprises do not have base indicators for this).

There are doubts about the correctness of using assignments to draw material resources into economic circulation when planning norms of working capital. Thus, in the 11th Five-Year Plan, ministries were given the task of drawing above-norm and unused (that is, above-plan) commodity stocks into economic circulation. However, when planning working capital norms, the USSR Ministry of Finances reduces these commodity stocks by the amount of these assignments. In our opinion, the practice of planning norms of working capital must be changed so as to create conditions for successful work by enterprises and at the same time to increase their responsibility for maintaining state discipline.

Refinement of the procedure for planning assignments to accelerate the turnover rate of working capital and draw material resources into economic circulation as well as the methodology for compiling reports on fulfillment of these assignments (along with increasing the responsibility of associations and enterprises for their fulfillment) will undoubtedly insure additional incentive to conserve material resources.

FOOTNOTE

1. M.S. Gorbachev, "Korennoy vopros ekonomicheskoy politiki partii" [The Fundamental Issue of Party Economic Policy], Moscow, Politizdat, 1985, pp 17-18.

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Utilizing Mining Wastes

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 11, Nov 85 pp 89-92

[Article by A. Yefremov, doctor of economic sciences, and V. Pakhomov, candidate of technical sciences: "On the Comprehensive Use of Mineral Resources"]

[Text] Every year the state increases allocations for environmental protection measures. And at the same time mining enterprises pile up large amounts of mine rock and enrichment wastes which harm the environment and simultaneously represent a fairly substantial reserve for solving the raw materials problem. For example, the dump heaps of the Krivoy Rog Iron Ore Basin alone contain more than 1.8 billion tons of gangue, more than 800 million tons of which is rock, while the amount of enrichment wastes found in slurry reservoirs exceeds 1 billion tons. More than 16,000 hectares of agricultural land has been diverted to store these wastes. In the future the volume of production wastes will increase at a higher rate because of drawing poorer ore into production.

Research by institutes has shown that a substantial part of the rock and enrichment wastes can be used to produce construction materials and trace-element fertilizers and for secondary recovery of iron concentrate and other valuable components.

In connection with the sharp increase in requirements of the national economy, expansion of the types of mineral resources involved in production, the trend toward higher losses during mining and primary processing, and higher labor expenditures for exploration, prospecting, mining, and processing, interest in the comprehensive use of mineral resources has substantially increased. However, we are still far from a satisfactory solution to the problem. Up to this point no uniform scientific approach has been developed for solving such questions as economic evaluation of each type of raw material in their totality and considering them in the country's mineral balance, determination of ecological consequences, and the planning, organization, and evaluation of production efficiency on the basis of comprehensive use of mineral resources.

In recent years trends toward improved use of mineral wealth are being clearly traced. Specifically, certain enrichment and metallurgical enterprises are converting to comprehensively utilizing useful components contained in mineral raw materials and reprocessing production wastes to obtain construction materials and mineral fertilizers. Nonetheless, comprehensive incorporation of deposits and the use of by-product minerals and enrichment wastes has not become a compulsory part of economic activity.

People most often refer to the lack and imperfection of technology and the need for large capital investments as a justification for the low level of comprehensive use of mineral raw materials. However, practice shows that there are deeper organizational and economic causes here. The following, in our opinion, are the main ones:

an imperfect mechanism of economic evaluation and accounting for mining by-product materials and enrichment wastes;

lack of precise regulations on planning and stimulating comprehensive use of mineral resources;

the inadequate interest of certain departments in comprehensive use of mineral resources.

At the present time mining industry wastes are not given the proper attention when planning the organization and evaluating the economic efficiency of production; this creates the preconditions to irrational use of natural resources.

Thus, billions of tons of mining by-product resources and enrichment wastes stored at dumpheaps (slurry reservoirs) at mining enterprises actually themselves accumulate labor expenditures for exploration, prospecting, extracting, transport, storage, and other work. However, as a result of the fact that production wastes are not economically evaluated, they fall outside the accounting sphere and become physical assets in which no one has an interest.

The lack of a mechanism for economic evaluation and the exclusion of secondary mineral resources from the country's mineral balance lead to their falling outside the sphere of national economic circulation and distortion of the true value of the resources extracted, that is, to a situation where it is impossible to evaluate the damage, both economic (the irreversible loss of assets, expenditures for maintaining the storage system, and diversion of agricultural land for dumpheaps and slurry reservoirs) and ecological (pollution of the air and water, damage to the landscape, and others).

At the present time the indicators of the economic activity of sectors and enterprises give a poor picture of the consequences of taking agricultural land for working mineral deposits and storing by-product (unused) types of mineral raw materials and production wastes, consuming more quantities of water than the norms establish, not using mineral resources comprehensively, not exploiting deposits fully, and polluting bodies of water and the atmosphere. In addition, the lack of a charge for natural resources creates the illusion of low production costs for managers, and this does a great deal of harm to the national economy. But in fact society's expenditures for exploring and prospecting for mineral deposits as well as the losses of possible economic value are enormous. In these conditions the development of an efficient mechanism for economic evaluation of these losses will be a prerequisite for using them rationally and comprehensively, increasing the level of efficiency of economic activity, minimizing the harm done to the environment as a result of production activity, and increasing the country's national wealth.

Many economic planners today incline to the belief that an objective need to consider production a function of a complex ecological-economic system has arisen in the present phase of economic development. This need stems from

recognition of the dual function of production: the creation of use values which maximally satisfy society's needs (which requires steadily increasing appropriation of natural matter) and environmental protection, that is, the restoration and maintenance of a dynamic balance between society and nature due to man's activities harming nature.

This principle will only be effective when form and content in the ecological-economic system do not contradict each other. This is confirmed by the actual functioning and development of the systems that extract natural resources from the earth's interior: the economic aspect dominates in them, frequently to the detriment of the ecological aspect. In economic activity, more attention is given to the need for mineral raw materials, and less to the condition of stockpiles and their rational and comprehensive use. This viewpoint as a rule also predominates when the prospects for developing the mining sectors of industry are reviewed.

Nonetheless, when the patterns of the functioning and development of these systems are studied, we must proceed from the fact that any goal of economic activity is ultimately social -- the creation of the most favorable conditions for people's lives. Harm to either the economic or the ecological aspect is equally undesirable to society: economic gain must not be obtained at the expense of harming the environment. Economics and ecology must be equally considered from the standpoint of social interests during production planning.

Under current production planning, first, the plan is legally fixed as law whose fulfillment is mandatory, and second, the consequences of its fulfillment (nonfulfillment) are well regulated administratively and economically. Analysis of transfers of management personnel of enterprises, associations, and sectors of the mining industry shows that they mainly take place for reasons related in one way or another to underfulfillment of plan assignments. The main share of supplements to the guaranteed salary are a result of successful fulfillment and overfulfillment of plan assignments for production and sale of output. Nothing similar exists in regard to the ecological side of the matter.

Many authors of studies in the field of improving the use of natural resources, without denying the need to implement legislative and administrative acts on the rational use of natural resources and environmental protection, express doubt regarding their efficiency and put great hopes on the economic mechanism of influence.

Intensifying economic measures to stimulate more rational use of resources will undoubtedly make it possible to more correctly determine the economic benefits or losses of particular methods of using them. However, this still does not mean that enterprises, associations, and sectors will strive toward this. For example, any mineral deposit is comprised of many components, and comprehensive utilization of mineral resources in production will have a substantially greater economic and ecological effect than using only the main component. At the same time, however, this will lead to substantial complication of the technology and organization of production, create additional difficulties in managing it, and sharply increase the level of risk of underfulfillment of plan assignments for producing the basic output.

Taking into account the specific nature of socialist production where the distribution of profit is a function of the state, economic compensation (for example, a 20-25 percent salary supplement for comprehensive use of raw materials) will hardly compensate for additional expenses related to the complication of production and possible administrative consequences from disrupting fulfillment of the plan for producing output. And conversely, in most cases managers are not properly accountable for noncomprehensive use of raw materials which causes economic and ecological damage.

In this situation, whatever the economic measures to induce comprehensive use of resources, managers of enterprises will above all strive to simplify production organization, neglecting a wage supplement for increasing the level of comprehensiveness and rationality of the use of raw materials. This problem can only be solved effectively when there is an optimal combination of economic, legal, and administrative methods of influence.

In order to increase the efficiency of using mineral resources in the national economy, research must be done on the following: improving the mechanism for stimulating the comprehensive use of raw materials; increasing the volume of use of mining by-product materials and wastes for producing construction materials; utilizing waste products as trace-element fertilizers; completely extracting the main component and extracting valuable by-products from waste after processing mineral raw materials; and utilizing the highly mineralized mine waters of the Krivoy Rog Basin.

Refinement of the mechanism for stimulating comprehensive use of mineral raw materials should be based on an optimal combination of economic, legal, and administrative methods of influence.

The norms of the use of mineral resources which insure the optimal combination of society's economic and ecological interests should be fixed in legal acts. Norms to regulate obligations and responsibility for adopting decisions during the process of economic activity must have the force of law for users of natural resources.

Administrative responsibility in the field of natural resource use should set in when a natural resource user consciously makes a decision which contradicts the laws regulating the use of mineral resources.

Economic influence should be exercised through improving the evaluation and accounting of mineral resources, setting standards of payment for resources, giving incentive for improving natural resource use indicators, and implementing economic sanctions for harmful deviations from established norms for using mineral resources.

One efficient way to satisfy the steadily increasing need for construction materials is to expand their production from mining by-product materials and enrichment wastes. At the present time this reserve is hardly used at all. Thus, of the total mass of 90 million cubic meters of rock and 60 million cubic meters of enrichment wastes dumped in the Krivoy Rog Basin every year, about 5 percent goes for industrial use.

In order to increase the use level of mining by-product materials and enrichment wastes for producing construction materials, additional prospecting work must be done on geological evaluation of gangue mineral resources extracted as by-products and dumped at existing mining enterprises of the ferrous, nonferrous, and other mining sectors of industry; broken rock and enrichment wastes whose use is economically expedient must be taken on the balance of mineral resources; technical-economic substantiation for creating and locating capacities to produce crushed stone, rubble stone, and sand on the basis of broken rock must be developed; the national economy's need for appropriate types of construction materials and the possibility of covering it using mining by-product rock and enrichment wastes must be determined; and an economic mechanism of material incentive for mining enterprises to increase the production of construction materials from broken rock and enrichment wastes must be developed.

The slurry of mining-enrichment combines and metallurgical plants contains a complex of elements (magnetic iron, zinc, manganese, nickel, and others) which are necessary for plant nourishment. This led to the idea of possibly using them as trace-element fertilizers.

Useful experiments to determine the possibility in principle of using slurry as trace-element fertilizers have been carried out by the joint work of the Krivoy Rog Ore Mining Scientific Research Institute's laboratory on comprehensive use of mineral resources, the Krivoy Rog Branch of the Donetsk Botanical Garden, and the Dnepropetrovsk Agricultural Institute. Experiments conducted on small sections of land planted with corn showed that the introduction of slurry from the mining-enrichment combines of the Krivoy Rog Iron Ore Basin and the Krivorozhstal Plant imeni V.I. Lenin substantially increases the yield of green matter and grain corn.

In studying this problem we must: scientifically substantiate the mechanism by which slurry affects the soil as trace-element fertilizers; broaden the geography and scope of certification of slurry as trace-element fertilizers; and determine under which climatic conditions, on what kinds of soil, and with which agricultural crops the maximal results in increasing yield are achieved.

When testing the wastes from converting iron ore, the Krivoy Rog Ore Mining Scientific Research Institute established the industrial content of valuable elements in open-hearth slurries at a number of Ukrainian metallurgical plants. In studying this problem, the reasons for the appearance of valuable components in open-hearth wastes must be determined and the constancy of their appearance substantiated; the degree of impact of other components and chemical compounds contained in the slurry (copper, lead, nickel, zinc, magnesium, aluminum, sodium, and others), the technology for extracting precious metals, and the value of the concentrates of these metals for metallurgical conversion must be established; the problem of collecting and sintering dust, removing the slurry from the slag chamber, and removing all kinds of impurities must be solved; and the technology for extracting precious metals from open-hearth slurry and the optimal plan for locating shops to extract valuable components must be developed.

Defining the ways and methods to utilize highly mineralized waters, the volume of which increases every year, is a very urgent problem. Thus, the amount of mine water discharged totals more than 60 million cubic meters a year in the Krivoy Rog Basin alone; at the same time they are becoming more mineralized.

Underground brine of the Krivoy Rog Basin is of the sodium-chloride type, characterized by rather high mineralization and a variety of microelement features. This allows the Krivoy Rog Ore Mining Scientific Research Institute to theoretically postulate that it is possible to use this brine as a mineral supplement in agricultural animal rations. On the basis of an agreement on scientific cooperation with the Dnepropetrovsk Branch of the Ukrainian Animal Husbandry Scientific Research Institute, experiments were conducted and it was established that salt obtained from this brine increases animal weight gain. Solving this problem will make it possible to supply the Ukraine's livestock breeding farms with feed brine and increase the animals' productivity.

At the same time the problem of protecting the environment is being solved because a sharp decline in the mineralization of discharged waters will decrease the salinization of reservoirs and soils.

During study of the problem the following must be developed:

- methods of sterilizing mineralized mine waters after first determining limits on bacterial contamination for use in animal feed rations;

- a technology of isolating these waters from service water supplied to the mine;

- an economic mechanism and technical conditions for supplying brine which create equal incentive for both suppliers and for consumers;

- a technology of storing brine at the places it is obtained and a system for transporting it to consumers;

These developments will have a positive effect on increasing the use efficiency of mineral and raw material resources in the national economy, helping preserve the earth's interior, and reducing the harmful impact of mining industry operations on the environment.

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Kazakhstan's Conservation Drive

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 9, Sep 85 pp 11-15

[Article by A. Batsula, Kazakh SSR minister of finances, under the rubric "Refining the Economic Mechanism": "The Goal Is Economical Expenditure of Material Resources"]

[Text] The significance of conserving material resources as one of the main factors of increasing the productivity of social labor and further intensifying the national economy has sharply increased in present conditions.

In his speech at a meeting with the managers of industrial associations and enterprises, kolkhozes and sovkhozes, and production brigades and specialists and scientists, General Secretary of the CPSU Central Committee Comrade M.S. Gorbachev noted the close link between the economical use of material resources and intensification of production and emphasized: "It is essential to reorganize work, attempt to obtain better final output for each unit of raw materials and capacities, and more decisively reduce labor expenditures. This is in fact intensification of production."

The republic has quite a few enterprises, associations, and economic organizations whose collectives are carrying out purposeful and practical work to conserve and rationally use material resources and marching in the vanguard of the all-people's struggle to increase the efficiency of social production and to fulfill the plan assignments of the current five-year plan ahead of schedule. It is due to the efforts of these collectives in 1984 that 24 ministries and departments of the republic overfulfilled the established annual assignments to conserve rolled ferrous metal products (they conserved 2,800 tons of rolled metal products, 21.2 percent of the plan assignment); 16 -- cement (26,000 tons or 89.7 percent); 24 -- lumber (23,200 cubic meters or 23.6 percent); 20 -- fuel (16,200 tons of standard fuel or 40.6 percent); 27 -- thermal energy (197,100 gigacalories or 37.1 percent); 24 -- electricity (100.6 million kilowatt hours or 60.6 percent); 20 -- diesel fuel (4,700 tons or 52 percent), and 11 -- gasoline (1,300 tons or 23.9 percent).

Wholly supporting the party's course aimed at intensifying social production, the republic's working people have envisioned in socialist obligations for 1985 "saving 155 million rubles worth of raw and processed materials, creating above-plan conservation funds, and working at least 2 days a year on these savings."

The collectives of the republic's enterprises and organizations are also obligated to unconditionally fulfill the established assignments to conserve material and fuel-energy resources and to conserve 16,000 tons of rolled ferrous metal products, 18,000 tons of cement, 25,000 cubic meters of lumber, 350,000 gigacalories of thermal energy, 260 million kilowatt hours of electricity, and at least 15,000 tons of motor fuel.

Questions of further intensifying production and increasing its efficiency are being solved through refining the economic mechanism and the entire system of management of the economy. In recent years a marked role has been assigned to the development and implementation of a system of measures focused on creating conditions to promote the conservation and rational use of material resources. This means establishing assignments for prime cost of output in the form of a ceiling on expenditures and including a ceiling (maximum level) of material expenditures in this assignment; awarding bonuses for conserving particular types of material resources; introducing direct deductions into economic incentive funds for conserving material resources and reducing deductions into

these funds for excessive consumption of material resources; introducing economic sanctions for excessive use of material resources as compared to the established norms; forming above-plan material resource conservation funds.

The "Instructions on the Procedure for Establishing Assignments for Prime Cost of Output (Work) for Industrial, Construction, and Transport Ministries, Associations, Enterprises, and Organizations in Five-Year and Annual Plans and a Limit (Maximum) in these Assignments on Material Expenditures and on Evaluating the Fulfillment of these Assignments" were developed in 1982 and have been in effect since 1983.

In accordance with these instructions, assignments for prime cost of output are ratified in five-year and annual plans of economic and social development in the form of a maximum level of expenditures in kopecks per ruble of commodity output in wholesale prices. A ceiling (maximum level) on material expenditures in kopecks per ruble of commodity output in wholesale prices has been ratified in the assignments for prime cost of output since the 1983 plan.

The fulfillment of assignments for maximum level of expenditures and the ceiling (maximum level) of material expenditures is evaluated by comparing actual expenditures per ruble of commodity output (in prices adopted in the plan) and the material expenditures included in them with the corresponding expenditures according to the ratified plan.

One of the main conditions which insure the successful introduction into practice of indicators (maximum level of expenditures and ceiling on material expenditures) is further refinement of the methods of planning, accounting for, and calculating the prime cost of output. In connection with this, implementing the measures which are contained in the draft of the new "Basic Procedural Principles for Planning, Keeping Records of, and Calculating the Prime Cost of Industrial Output" will be important. The development of this draft is now being completed. A number of institutes participated in its development under the guidance of NIEIPiN [possibly Scientific Research Economics Institute of Planning and Norm-Setting] of USSR Gosplan.

The universal conversion to the normative method of accounting for and calculating prime cost is also important in successfully introducing and increasing the stimulative role of new indicators being used to evaluate enterprise activities to reduce the prime cost of output and material expenditures. However, many ministries and departments are presently doing an unsatisfactory job in introducing this method of accounting for and calculating the prime cost of output.

In 1984 plans and measures to introduce the normative method of accounting for and calculating prime cost remained unfulfilled in numerous republic ministries and departments. Thus, the Kazakh SSR Ministry of Construction Materials Industry used the normative method of accounting for production expenditures in only 4 enterprises while the plan specified 15; the Ministry of Light Industry -- 2 enterprises with 4 planned; and the Ministry of Installation and Special Construction Work -- 4 enterprises with 10 planned.

The republic Ministry of Rural Construction planned to introduce this method at 37 enterprises but in fact it was not even used at 1. While in the republic as a whole measures to introduce elements of the normative method of accounting for production expenditures were generally overfulfilled, they remained underfulfilled at the republic Ministry of Land Reclamation and Water Resources and Ministry of Construction Materials Industry and at Kazmezhkolkhozstroy [Kazakh Interkolkhoz Construction Organization].

At the same time enterprises of certain republic ministries and departments tolerated major shortcomings in fulfilling assignments to reduce the prime cost of output and to observe the established ceilings of material enterprises in 1984. As a result, many permitted overexpenditures as compared to the maximum level of expenditures and ceiling of material expenditures set by plan. Thus, industrial enterprises of the Kazakh SSR Ministry of Power and Electrification allowed an overexpenditure of 11,307,000 rubles on expenditures per ruble of commodity output and 17,318,000 rubles on material expenditures (excluding savings which are not taken into account when evaluating fulfillment of assignments); the Kazakh SSR Ministry of Construction Materials Industry -- 11,779,000 rubles and 5,867,000 rubles, respectively; the Kazakh SSR Ministry of Food Industry -- 11,175,000 rubles and 17,939,000 rubles; the Kazakh SSR Ministry of Meat and Dairy Industry -- 4,004,000 rubles and 2,316,000 rubles; the Kazakh SSR Ministry of Fish Industry -- 4,331,000 rubles and 4,144,000 rubles; and the Kazakh SSR Ministry of Rural Construction -- 4,471,000 rubles and 1,069,000 rubles.

And 25 percent of the enterprises of Kazakh Ministry of Power and Electrification did not fulfill the assignment on prime cost and tolerated overexpenditures compared to the established maximum level of expenditures; corresponding figures for other ministries were: 42 percent -- Ministry of Ferrous Metallurgy; 34 percent -- Ministry of Construction Materials Industry; 14 percent -- Ministry of Food Industry; 34 percent -- Ministry of Meat and Dairy Industry; 71 percent -- Ministry of Fish Industry; and 37 percent -- Ministry of Rural Construction.

The statute "On the Amount of Savings of Material Resources Used to Pay Bonuses" has been in effect since 1982.

The size of bonuses paid for conserving material resources is established in percentages of the total savings, depending on the type of material resources.

Expenditures to pay bonuses for conserving material resources are part of the prime cost of output (work). Capital earmarked for paying these bonuses is deposited in the material incentive fund.

Bonuses for conserving certain types of material resources have also been awarded at earlier times -- for conserving fuel, electricity, thermal power, and petroleum products. The group of material resources for whose conservation bonuses are awarded has been expanded since 1982: bonuses are awarded for conserving diesel automobile and tractor fuel, fuel for high-speed transport diesels, naval mazut and motor fuel for medium-rpm and low-rpm

diesels, ferrous and nonferrous metals, construction materials and prefabricated construction elements, compressed air, and water.

This same statute envisions awarding bonuses to workers, foremen, technologists, designers, and other engineering-technical personnel for achieving progressive, technically substantiated norms of expenditure of certain types of material resources. Bonuses are paid from the material incentive fund, while at enterprises where there is none the enterprise fund is used.

Bonuses for conserving certain types of material resources and for achieving norms of their expenditure are paid beyond the maximum amounts set for each sector. The total sum of bonuses for conserving certain types of material resources and for achieving norms of their expenditure cannot exceed 75 percent of the monthly wage rate (official salary) figured per quarter.

In our opinion, a uniform source for paying bonuses and for conserving certain types of material resources and for achieving progressive, technically substantiated norms of expenditure of resources must be established. It is hardly fair to define deductions from the prime cost of output (work) with their subsequent deposit in the material incentive fund as this source for paying bonuses for conserving certain types of material resources and make the material incentive fund the source for paying bonuses for achieving progressive, technically substantiated norms of expenditure of resources.

In our opinion, we should abandon the idea of creating a special source for paying bonuses for conserving certain types of material resources by deducting capital from the prime cost of output (work) into the material incentive fund.

Both these types of bonuses should be paid from one source -- from the fund of above-plan savings of material resources.

In addition to these two types of bonuses, rewards are also paid at enterprises for reducing material expenditures per ruble of output as compared to the established ceiling; this is done through total additional deductions into the material incentive fund made for conserving material resources.

Bonuses for reducing material expenditures should also be paid from the fund of above-plan savings of material resources. This would make it possible to abandon the current procedure where additional deductions are made into the material incentive fund for reducing material expenditures.

At the same time it would also be possible to abandon the present procedure for reducing deductions into the material incentive fund for exceeding the ceiling of material expenditures, especially since there is no particular need to do so at this time inasmuch as economic sanctions for the irrational use of material resources have been introduced.

USSR Gosplan, USSR Ministry of Finances, USSR Goskomtrud [State Committee on Labor and Social Problems], and the AUCCTU developed and ratified a statute on the procedure and amounts of direct deductions into the economic incentive funds for conserving material resources in order to increase the economic

interest of ministries, departments, associations, and enterprises in using material resources efficiently. It has been in effect since January 1983.

In accordance with this statute, additional direct deductions are put in incentive funds when material expenditures are reduced as compared to the established ceiling. When the ceiling of expenditures is exceeded, incentive funds are reduced. Sums of direct deductions into incentive funds or reductions of these funds are determined according to an approved scale. It gives the amounts of increase (decrease) of incentive funds established in percentages of the absolute savings (overexpenditure) of material expenditures, depending on a coefficient which characterizes the relationship of wages with extra charges to material expenditures.

Direct deductions into incentive funds for reducing material expenditures are made for planned-profit associations and enterprises using above-plan profits and for planned-loss associations and enterprises using the actual reduction of losses as compared to the plan. Above-plan profits for the ministry as a whole and the above-plan profits of particular production associations (enterprises) as well as the ministry's (department's) profit or incentive fund reserve may be used as the source for direct deductions.

Deductions for reducing material expenditures have begun to take a prominent place in the total sums of additional deductions into material incentive funds (FMP) at industrial enterprises of a number of republic ministries. The 1984 data on particular republic ministries given in the table below confirms this.

Table 1.

Таблица 1

a) Наименование министерств республики	b) Сумма отчисле- ний в ФМП за счет прибыли по плану (тыс. руб.)	c) Общая сумма изменений отчис- лений в ФМП в связи с пере- выполнением (недовыполне- нием) плановых заданий (тыс. руб.)		d) в т.ч. за экономно (перерасход) материальных затрат (тыс. руб.)		e) Удельный вес (в %) дополни- тельных отчисле- ний уменьшения отчислений в ФМП за экономно (перерасход) затрат в общей сумме изменения отчислений в ФМП	
		f) увели- чено	g) умень- шено	f) увели- чено	g) умень- шено	по сумме увели- чения	по сумме умень- шения
		h)	умень- шения	умень- шения	умень- шения	умень- шения	умень- шения
1) Миндотпром	17396	1943	1903	1413	924	79,7	48,6
2) Миндизцпром	7554	271	166	91	30	33,6	6,4
3) Миндхимпром	8678	740	1159	165	410	14,4	35,4
4) Миндмехпром	875	57	276	42	190	17,9	68,8
5) Миндмет	15864	3716	87	—	—	—	—
6) Миндмашиностр.	28374	2052	1592	789	272	38,5	17,1
7) Миндстроиматериалов	6278	931	1242	379	372	62,2	30,0
8) Миндэлектростр.	3509	359	219	260	—	72,4	—

Key:

- a) Name of the Republic Ministry
- b) Total deductions into FMP [Material Incentive Funds] Using Planned Profits (in thousands of rubles)
- c) Total sum of changes in deductions into FMP because of overfulfillment (underfulfillment) of plan assignments (in thousands of rubles)

- d) Included in that, for savings (overexpenditure) of material expenditures (in thousands of rubles)
- e) Proportion (in percentages) of additional deductions (reduction of deductions) into FMP for savings (overexpenditure) of expenditures in the total sum of change in deductions to the FMP
- f) Increased
- g) Decreased
- h) By total increase
- i) By total decrease
- j) Ministry of Light Industry
- k) Ministry of Food Industry
- l) Ministry of Meat and Dairy Industry
- m) Ministry of Fish Industry
- n) Ministry of Power and Electrification
- o) Ministry of Nonferrous Metallurgy
- p) Ministry of Construction Materials Industry
- q) Ministry of Timber, Pulp and Paper, and Wood Processing Industry

As is apparent from the data cited in the table, of the total increase in deductions into the material incentive fund, the proportion of additional deductions for reducing material expenditures is highest in the Ministry of Light Industry (72.7 percent), the Ministry of Timber, Pulp and Paper, and Wood Processing Industry (72.4 percent), and the Ministry of Construction Materials Industry (62.2 percent). Additional deductions into the material incentive fund for reducing material expenditures are highest for enterprises of the Ministry of Light Industry (1,413,000 rubles), the Ministry of Ferrous Metallurgy (789,000 rubles), and the Ministry of Construction Materials Industry (579,000 rubles).

For the Kazakh SSR Ministry of Light Industry the total increase in the material incentive fund because of overfulfillment of plan assignments according to fund-formation indicators totaled 1,943,000 rubles. Of this amount, 1,413,000 rubles (or 72.7 percent) is the increase in the material incentive fund for conserving material expenditures. At the same time, however, the material incentive fund at enterprises of this ministry was decreased by a total of 1,903,000 rubles because of underfulfillment of plan assignments according to fund-formation indicators. Of that amount, 924,000 rubles (or 48.6 percent) was the decrease in the material incentive fund for the overexpenditure of material resources.

In 1984 6 enterprises of the republic's Kaztekstilprom Industrial Association of the republic Ministry of Light Industry made 469,000 rubles worth of additional deductions into the material incentive fund for reducing material expenditures by 3,729,000 rubles but then 4 other enterprises of this association reduced deductions into this fund by 615,000 rubles.

The total overexpenditure of material expenditures tolerated exceeds the total savings obtained by 4.9 times while total reduction of the material incentive fund for overexpenditure of material expenditures is only 1.3 times greater than the total additional deductions into this fund. Additional deductions (reductions of deductions) into the material incentive fund in percentages of the total savings in material expenditures obtained (overexpenditure allowed)

total 12.6 percent and 3.4 percent, respectively. This same situation is also observed in other associations and ministries.

An important innovation in economic practice is the use since 1 January 1985 of economic sanctions on enterprises and organizations which allow overexpenditure and irrational use of material resources.

For overexpenditures of raw material, fuel-energy (excluding gas, electricity, and thermal power), and other material resources above the established norms, double the value of the overexpenditure of material resources is charged against the enterprises and organizations and taken into Union budget income.

If an enterprise (organization) uses material resources allocated by plan for other than their intended purpose, triple the value of the material resources used for other purposes is taken from it into the Union budget income.

Production-technical output and consumer goods used by manufacturing enterprises (suppliers) for their own needs or for industrial processing beyond the allocated funds or supplied to other consumers without allocation of funds are not considered in fulfillment of the plan assignments when awarding bonuses or when forming economic incentive funds. Profits obtained from selling output and goods without allocated funds or above them is paid into Union budget income.

When an enterprise or organization writes off output and goods in violation of established demands, their value is subject to transfer to Union budget income.

Applying these measures of accountability along with implementing other measures should insure that work to conserve and rationally use material resources at enterprises and organizations will intensify. Of course, a great deal here depends on the skillful organization of work of USSR Gosplan organs and other ministries and departments who are entrusted with distributing and realizing material resources and on the work of financial organs.

These organs are obligated to set up efficient monitoring of reports presented by enterprises and organizations on the use of material resources and overexpenditures tolerated there, systematically verify the rational use of resources, and identify violations. They must send orders to financial organs on applying economic sanctions against enterprises and organizations which permit violations. An attempt must be made to use these sanctions against all enterprises where violations in expending material resources and in fund discipline are tolerated.

In this connection, questions of insuring the reliability of reports presented by enterprises and organizations on the actual consumption of material resources as compared to established norms, correct organization of precise accounting of consumption of resources at enterprises, the use of modern control and measuring instruments, and the establishment of substantiated norms and standards become especially important.

Financial organs must pay constant attention to questions of insuring the reliability of recordkeeping and reports on consumption of material resources.

When inspections and analysis of financial-economic activity are made at enterprises and associations and surveys and audits are conducted, financial organs must more deeply reveal existing shortcomings and violations in setting norms and consuming material resources and distortions in reports.

According to the current procedure, payments made by enterprises and organizations into Union budget income in connection with the application of economic sanctions for overexpenditures and using material resources for purposes other than those intended as well as for unsubstantiated write-offs of output and goods are included in the results of their economic activity. Payments into Union budget income of profit obtained from enterprises and organizations realizing (using) material resources without allocated funds or above the plan are considered part of capital diverted from profit.

Economic sanctions should not only affect the cost-accounting interests of enterprise collectives as a whole, but also the earnings of particular employees. In our opinion, for this purpose the amounts of the bonuses to the managers and engineering-technical personnel of the enterprise against whom economic sanctions for irrational use of material resources have been applied must be decreased, and in an amount greater than the sum of these sanctions.

Starting in 1985, a fund of above-plan savings of material resources was created in associations, enterprises, and organizations. The procedure for forming and using this fund is defined by the "Statute on the Procedure for Forming and Using the Fund of Above-Plan Savings Formed through the Work of Labor Collectives to Work 2 Days a Year on Conserved Raw and Processed Materials and Fuel," ratified by USSR Gosplan, USSR Gosstnab, USSR Goskomtrud, USSR Ministry of Finances, the CPSU Central Committee, and the AUCCTU.

A special (balance) account -- the "Fund of Above-Plan Savings of Material Resources" -- is being opened to keep records of above-plan savings in material resources actually obtained at associations, enterprises, and organizations. The sums of above-plan savings are determined by multiplying the difference between the actual and planned levels of material expenditures per ruble of work, services, or output produced by their actual volume for the report period. Records of the actual amount of above-plan savings obtained are made quarterly in running total from the beginning of the year.

At USSR Gosbank institutions, special accounts are being opened for ispolkoms of local Soviets of People's Deputies into which the sums of above-plan savings of material resources obtained by production associations, enterprises, and organizations located in the territory of the given Soviet are transferred. And the sums of actually obtained above-plan savings of material resources are decreased by the sums of bonuses actually paid (transferred) to employees for conserving certain types of materials and of additional deductions into incentive funds for reducing material expenditures as compared to the established ceiling of material expenditures.

The sum of above-plan savings of material resources can be transferred to the special account only within the limits of a certain part of the association or enterprises's above-plan profits. This part of the above-plan profits is calculated by the procedure established for distributing profits.

We have examined the currently existing economic levers of the economic mechanism, whose conscious and thoughtful use should promote economical and rational consumption of material resources. Using these levers will have an effect on increasing the efficiency of consumption of material resources only when a complex of organizational, indoctrinational, technical, and economic measures is carried out.

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Ukrainian Gossnab Conservation Drive

Moscow EKONOMICHESKAYA GAZETA in Russian No 49, Dec 85 p 9

[Interview with P.I. Mostovoy, chairman of the Ukrainian SSR Gossnab, by editors of EKONOMICHESKAYA GAZETA; date and place not given; under the rubric "Manage the Economy Rationally: Conservation and Thrift": "Look at Resource Conservation in a New Way"]

[Text] The Ukrainian SSR has accumulated positive experience in resource conservation and in reducing the material intensiveness of production on the basis of accelerating scientific-technical progress. This experience has been approved by the CPSU Central Committee. The collectives of the republic Gossnab are doing a great deal to conserve and rationally use raw material, fuel-energy, and other material resources. At the request of the editors, P.I. Mostovoy, the chairman of the republic Gossnab, tells about the main directions of this work.

P.I. Mostovoy: In the beginning of the current five-year plan period UkSSR Gossnab and its territorial supply organs, together with the ministries and departments, worked out and began planned implementation of a program of organizational-technical measures to intensify monitoring of rational use of raw and processed materials in all sectors of the republic's economy. Taking a close look at production and the technology of manufacturing output, we found a whole range of reserves for conserving resources. For example, we began to identify the causes of extremely long shipments and found that a good one-third of the resources are "on wheels" all the time. Another third lies as "dead capital" in so-called production and above-norm stocks.

We also made a thorough review of the widely known constant additional demands of construction sites for equipment and materials. And what did we find? They have the same shortcomings as in industry, plus deterioration because of slipshod storage.

As a result, we outlined a precise program of actions on resource conservation. And it began with setting more substantiated norms for

resources; the normative base began to be refined every year while the request campaign was still underway, and in this sense the local organs of material-technical supply were activated. In the 11th Five-Year Plan UkSSR Gossnab subdivisions managed to review the substantiation of 435,000 norms of resources expenditure and 32 percent of the norms were reduced. As a result, the planned need for resources was reduced.

There is one more important point -- substantiating assignments to conserve the main types of material and fuel-energy resources and deliver them to the ministries and departments and through them to associations and enterprises. And while in 1981 the republic only fulfilled the assignment to conserve thermal energy, in the current five-year plan period these assignments have been overfulfilled on five major items.

Editors: Pavel Ivanovich, an exposition on resource conservation experience in the republic's labor collectives has been set up at the UkSSR VDNKh [Exhibition of the Achievements of the UkSSR Economy]. Couldn't you tell about it in more detail?

P.I. Mostovoy: In fact the permanent exhibit "The Ukraine's Conservation Reserves" is an interesting form of work on resource conservation. We organized it in 1982.

It demonstrates the directions, ways, and methods of conservation and rational use of raw and processed materials and fuel-energy resources using specific examples. It also covers the experience of introducing low-waste technologies, reducing materials intensiveness, reducing defects, and more fully drawing secondary raw materials into production. We also openly mention cases of mismanagement, the exact addresses, and the specific guilty parties. It is very effective: managers of enterprises who have permitted irrational use of resources immediately take measures to eliminate the shortcomings.

At many exhibits today you can see small charts with evidence of the positive changes and a description of the measures adopted following critical observations. If the entire savings achieved in the republic's economy in the last 3 years following critical signals from the exhibit is summed up, it totals 200 million rubles. The exhibit has been a good school of conservation and thrift in the republic's economy and has even become known abroad. It literally opened the eyes of many managers to the real conservation reserves and became, figuratively speaking, one of the accessible and understandable forms of the cost-cutting mechanism in action.

Seminar studies are being conducted here with the leaders of republic ministries and departments and sectorial and oblast interdepartmental commissions, and with specialists. More than 11,000 people have already gone through the training.

It also taught us, material-technical supply workers, a great deal. The main thing is it forced us to look at our own activities in a new way, at how many resources are being lost because of deliveries of output which is not ready for consumption and output which is incomplete.

Editors: What are the republic's material-technical supply organs doing to supply consumers with output of increased technological preparedness and to prepare output for production use?

P.I. Mostovoy: I will say right off that are fewer and fewer sceptics who assert that Gossnab is sticking its nose into someone else's affairs. No, that is our work -- the one who supplies funds for resources above all should concern itself with their economical use. Life has convincingly confirmed that production services rendered by supply and marketing organizations act as a factor of intensification not only of social production but of the sector of material-technical supply itself.

In our sector today 90 service shops and sections to process and prepare materials for industrial use have been set up and are operating. Conservation of material resources by offering enterprises additional production services has tripled during the 11th Five-Year Plan. Shops and sections are very important in the material-technical supply of so-called small consumers of industrial output for whom processing or preparing metal, pipe, and timber which funds allocate for their use is difficult.

For the 12th Five-Year Plan we envision a substantial expansion of the products list and assortment of production services and significant growth in their volume: for rolled ferrous metal products they will increase 4.3-fold, for ferrous metals -- 8.2-fold, for cable -- by 11.5 percent, and for paper products -- by 36.8 percent.

Having carefully studied domestic and foreign experience, we have drawn the conclusion that the creation of major highly-mechanized regional centers to prepare metal output for production use is needed. The Ukrainian CP Central Committee, UkSSR Council of Ministers, and USSR Gossnab support our proposals. The first such enterprise -- Kievmetalloprom -- is now operating in the settlement of Kalinovka near Kiev. By the end of 1985 its capacity will reach 250,000 tons of processed metal. Similar enterprises will be put on line in Donetsk and Odessa, Dnepropetrovsk and Kharkov, Zaporozhye, Simferopol, Voroshilovgrad, Lvov, and Vinnitsa.

The republic Gossnab has now expanded work to create regional centers for other types of output as well. The Kievstroynabsbyt [possibly Kiev Construction Supply and Marketing] Administration is completing construction of a center to offer production services to construction organizations. We are also organizing sections to harden metal-cutting tools and fast-wearing parts using "Bulat"-type units.

Editors: And what can you say about bringing secondary resources and production wastes into economic circulation and processing them?

P.I. Mostovoy: UkSSR Gossnab Ukrglavvtorresursov [possibly Ukraine Administration of Secondary Resources] organizations and enterprises draw about 900,000 tons of secondary raw and processed materials into economic circulation and process them every year. We also produce output which is very necessary to the country from secondary raw materials. But on the whole about 60 million rubles worth of capital investments were directed to develop this

subsector in the UkSSR Gosplan system, and over 45 million rubles worth of new production funds, or double the amount, were introduced than in the 10th Five-Year Plan.

In 1985 a capacity to produce 50,000 tons of cut-out boxes with multicolored print from cardboard made at the combine was put on line at the Kiev Cardboard-Paper Combine. Is this a lot or too little? It is easy to be convinced that it is a lot if we say that 9 factories are in operation in the republic and they produce only 17,000 tons of these boxes. This output was formerly bought abroad but now we ourselves export it.

But secondary resources involve not only economy and resource conservation, but also keeping the environment clean. Take, for example, fluorescent and mercury vapor lamps. More than 20 million units of them are used every year in the Ukraine alone. For their production 180 tons of mercury, which is toxic, is consumed. Proper recycling of them was not set up. They were discarded in dumps and polluted nature. This is on the one hand, but on the other -- we lose 1.5 million rubles worth of scarce metals such as mercury, tungsten, nickel, copper, and tin. We are setting up the first shop to use them.

Editors: Has the experience in resource conservation which has been accumulated in the republic also more precisely identified the problems which must be solved immediately?

P. I. Mostovoy: There are in fact problems. At the present time, for example, enterprises and organizations have virtually no interest in substituting secondary raw materials for primary ones. The question of increasing purchase prices for certain types of secondary raw materials has also become crucial. In addition to refining price-setting, the system for planning, recordkeeping, and stimulating the use of production wastes and consumption must be improved.

In our opinion, the leaders of departments, associations, enterprises, and organizations where these waste products are formed in the production process should have personal responsibility for using secondary resources and industrial waste products. But we believe they should more actively concern themselves with creating technologies, equipment, and capacities to process secondary resources and insure their procurement and supply.

Finally, one of the machine building ministries must be made the head ministry for processing secondary resources and be given bank credits, ceilings for contract work, and materials and equipment for building and reconstructing capacities to process them. But technologies for their utilization should be developed by those ministries and enterprises which produce the output. For example, it seems the Ministry of Light Industry should develop the technology for reprocessing clothing made from fabric with chemical fibers, while the Ministry of Petroleum Refining and Petrochemical Industry should develop the technology for reprocessing oversized tires and metal-belted tires.

The cause of resource conservation only benefits when the procedure for drawing above-norm commodity stocks into economic circulation is revised and simplified, territorial material-technical supply organs are granted broader

rights and authority, and the exchange of output within the limits of equal value is expanded.

In conclusion I will say that work on resource conservation being carried out by the UkSSR Gosstab collectives has had certain positive results. Nonetheless, we are not seduced by what has been achieved and we understand that this is only the beginning of the large task of meeting the major challenges which the party has posed for the Soviet people and which must be resolved immediately.

Guide for Conservation Course

Moscow EKONOMICHESKAYA GAZETA in Russian No 49, Dec 85 p 11

[Article under the rubric "Helping the Propagandists of Communist Labor Schools": "Preserving Material Resources and Using Them Rationally"]

[Text] Materials on the first two topics of the new course "Put Reserves for Conservation and Thrift into Action" were run in Nos 40 and 43 of EKONOMICHESKAYA GAZETA. Materials on the third topic "Preserving Material Resources and Using Them Rationally -- Put Secondary Resources and Waste Products to Work" are published below.

The earlier publications of study materials on the course "Put Reserves for Conservation and Thrift into Action" covered questions of the struggle to fulfill plans and obligations to conserve material resources, utilize conservation reserves, and improve the norm-setting for expenditure of raw and processed materials, fuel, and energy.

Pre-Congress documents speak of the importance of intensifying work on resource conservation. The draft of the new edition of the CPSU Program points out that resource conservation is becoming a decisive source for satisfying the economy's increased need for fuel, energy, and raw and processed materials. It is emphasized that we must eliminate mismanagement and various nonproduction expenditures and losses.

Maximally eliminate losses and irrational expenditures and more broadly involve secondary resources as well as by-products in economic circulation -- this is the task the draft of the Basic Directions of Economic and Social Development of the USSR poses. In the draft of the CPSU By-Laws (with proposed changes) it is noted that a party member is obliged to preserve and increase socialist property.

So economical and rational use of resources is now the duty of every communist and the patriotic cause of every Soviet person.

This has been expressed in the State Plan of Economic and Social Development of the USSR for 1986, adopted by the 4th session of the USSR Supreme Soviet.

The Struggle Against Mismanagement

The obligation and duty of every citizen is to preserve and consolidate socialist property and fight against misappropriations and waste of state and social property.

This principle of the USSR Constitution is not simply a legal but a deeply moral norm of the socialist way of life.

Each person should be vitally interested in making sure that the public good does not suffer. The struggle against losses of physical assets during storage is becoming especially urgent. Losses are always the result of some particular person's fault. Here is a typical case cited in the pages of EKONOMICHESKAYA GAZETA under the rubric "Arbitration Disputes." The procurement office of the Chistopolskiy Rayon Potreboyzuz per instructions of the procurement office of the Tatarsk Oblast Potreboyzuz shipped 1,200 tons of potatoes on contract for an administration of the RSFSR river fleet. The potatoes were loaded on a steamship in the city of Kazan and sent to Astrakhan. But when the output arrived at the destination, it was found the potatoes were no longer commercially marketable and had become unfit for consumption. Both the shipper who had loaded the poor quality potatoes into the steamship and the recipient, since he had taken no measures to immediately inspect, sort, and dry the potatoes obtained, were found to be guilty. The steamship was loaded in violation of the rules and the temperature requirements for storage areas were also ignored.

RSFSR Gopsarbitrazh [State Arbitration Commission] exacted the losses from the guilty parties -- two-thirds from the shipper and one-third from the recipient. However, the product created by farmers' labor was practically destroyed by the negligence of the consumer cooperative employees and the river transport workers supply administration. Unfortunately, there are quite a few such cases.

Life itself has made it necessary to increase the accountability of officials for the safe condition of socialist property. A special system regulated by law for compensating for damage done has been set up in the USSR. It is based on the principle of material responsibility for mismanagement. So, the value of the damaged parts or items is deducted from the wages of the person directly responsible for the defect while pay stoppages up to three times the salary are imposed on the officials who tolerated mismanagement.

Preventing losses from low-quality output is one of the important sources for increasing production potential. But there is another side here -- the moral side. In the editors' pre-Congress mail is a letter from brigade foreman B. Filimonov (Petrozavod Machine Tool Building Plant). He writes: "What can be more immoral than the senseless destruction of the results of one's own labor! It is absolutely correct that the party puts the question point-blank: we will not be able to successfully develop the economy without conserving resources and being thrifty. Thrift is not simply desirable, as before; we can no longer do without it." Losses from defective products were reduced by 5-7 percent at the Petrozavodsk Machine Tool Building Plant in 1985. To a considerable degree the system introduced in January 1985 under which each

person who tolerates defective material pays half the value of the improper article helped accomplish this.

In the class it is essential to pose vividly the question of the struggle against mismanagement and reducing defective products, and to achieve very active class participation in this conversation.

A great deal of experience of a genuinely proprietary attitude toward physical assets has been accumulated today. Thus, the movement for highly sophisticated storage of physical assets has been developing for a number of years at Lithuanian SSR Gossab enterprises which supply production-technical output. A no-waste storage technology has been introduced there. As a result, there are no losses in warehouses at all. They have established an exemplary system for developing production services, which makes it possible to satisfy enterprises' needs for the volumes and structure ordered.

During the class the propagandist should direct students' attention to progressive experience accumulated at the enterprise in the struggle to reduce losses of material resources, help make it widespread, and jointly think through practical steps to introduce the proper procedure.

Using Waste Products and Secondary Resources

In his report at the 4th session of the USSR Supreme Soviet, M.S. Gorbachev stressed that the 1986 plan is oriented to accomplishing the actual conversion to intensive methods of economic activity. Next year the increase in production volume should be maximally accomplished through resource conservation. Economy on the job is becoming the main source of resource conservation for the entire increase in production volume.

Intelligent use of public wealth presupposes comprehensive processing of raw materials and the introduction of no-waste technology. What was formerly thrown into dumps and accumulated as unneeded waste products is now becoming a valuable raw material for processing. Using secondary material resources makes it possible to increase final output without increasing the consumption of natural raw materials.

During the 11th Five-Year Plan secondary material resources drawn into the economy enabled us to replace a total of about 50 billion rubles worth of primary materials. For example, it was calculated that due to reuse of wooden crates 25 million cubic meters of wood converted to rough timber is conserved every year.

Especially large expenditures are needed to produce spare parts. Experience shows that reducing these expenditures makes it possible to save substantial amounts of capital. Thus, the Vilnyus Fuel Equipment Plant of the Ministry of Tractor and Agricultural Machine Building, which has initiated manufacturer's repair of its own output, was able to conserve the output of an entire plant by insuring the uninterrupted work of pumps without significantly increasing production of spare parts.

The CPSU Central Committee Politburo approved the work experience of enterprises and associations of the UkSSR on organizing rational use of material resources and bringing secondary resources into circulation.

The Ukraine uses 85 types of secondary raw materials and waste products on a planned basis (while the country as a whole uses 40). In the current five-year plan period 700 million tons of secondary resources will be involved in the republic's industrial production. Since the start of the five-year plan period, 1.3 times more waste products and secondary resources have been used than in the previous five-year plan period. A total of 13.5 billion rubles worth of output has been produced using them. The materials intensiveness of the output being produced was reduced by 3.5 percent in the last 4 years as compared to 1.7 percent according to the five-year plan.

At the present time a program of resource conservation and secondary resource use has been ratified for the 12th Five-Year Plan. Implementing the measures outlined will make it possible to conserve more than 10 billion rubles worth of raw and processed materials, fuel, and energy.

The experience in resource conservation accumulated in the Ukraine is discussed in detail in the article by the republic Gosstab chairman P.I. Mostovoy published in this issue of the weekly newspaper.

The draft of the Basic Directions stresses the need to extensively draw secondary resources as well as by-products into economic circulation.

In the years of the 12th Five-Year Plan the necessary prerequisites for substantially improving the use of secondary resources in the economy will be actively created.

The propagandist must structure the class in such a way as to insure that each student precisely defines for himself those particular tasks to use production wastes which he can perform at his own work place, in his own enterprise.

Intelligent Use of Resources in Daily Life

Practically one-fifth of all material resources are used in the daily life sphere. Naturally, a prudent attitude toward them is an important condition for accelerating the country's socioeconomic development.

The task of a prudent attitude toward bread and other foodstuffs is undoubtedly paramount. For example, a number of cities have organized the buying up of stale bread from the population. Going to the bakery, the buyer takes the dry bread, turns it in, and buys fresh bread.

One of the important directions of conservation is the preliminary preparation of foodstuffs. Take, for example, potatoes. In many cases losses of potatoes during storage reach 40 percent. And if we consider that wastes from potatoes already bought occur in each family, it is easy to understand that the figure is even greater. How can the situation be changed? Livenskiy Rayon in Orel Oblast organized the preparation of peeled potatoes for sale. The peelings are used for livestock feed. Industrial processing of potatoes into

semifinished goods makes it possible to reduce losses of potatoes to an even greater degree.

A major task is to set up strict accounting of expenditures of electricity, water, and gas. Even such a simple question as heating water in small quantities, if the home has an electric stove, also becomes important in conserving electricity. It was calculated that if a small amount of water is boiled in a teapot on an electric stove, twice as much electricity is used as where the same amount of water is boiled using a hot water heater. A simple operation -- putting in gas and water meters -- changes people's attitude toward consuming these valuable types of material resources. In this connection, we face the task of increasing the production of instruments which

monitor the consumption of these resources in daily life; this enables a significant amount of fuel and other resources to be conserved.

More than 27 billion rubles is being taken from the budget and other sources to build housing in 1986. By the end of 1986 the state housing fund will reach more than 44 million apartments and their total area will exceed 2.2 billion square meters. This is an enormous achievement of our people. The 4th session, 11th convocation of the USSR Supreme Soviet stressed the need to increase concern for the preservation of housing, promptly repair dwellings, and make them last longer. Some 6 billion rubles worth of state subsidies beyond the apartment payment have been allocated to maintain and repair housing.

The propagandist should pose the question to students of what needs to be done to preserve housing resources where they live.

The third topic of the course envisions conducting a practical class. Its goal is to analyze and introduce proposals to reduce and improve the use of production waste products in your shop and in the section, brigade, and work place.

Plan Assignments for 1986



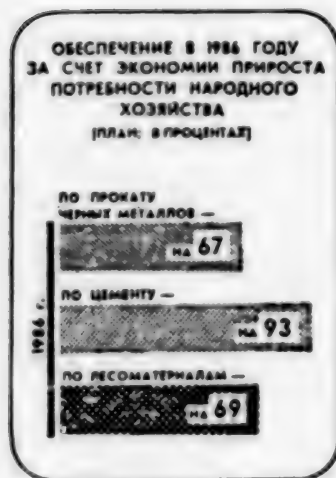
[Savings of Electricity]
[(in billions of kilowatt hours)]

The planned volume of output of electricity satisfies the economy's needs with the condition of insuring its conservation in the amount of at least 19 billion kilowatt hours as compared to the 8 billion kilowatt hours anticipated in 1985.



[Reduced Consumption of Metal per
Unit of National Income
(in percentages)]

The plan for 1986 envisions reducing consumption of metal per unit of national income by 2.7 percent as compared to 1.9 percent in 1985.



[Increase in the Economy's Needs
Satisfied through Conservation
(plan; in percentages)]

[of Rolled Ferrous Metal Products]

[of Cement]

[of Lumber]

The increase in the economy's needs for rolled ferrous metal products is to be 67 percent satisfied through conservation, for fuel-energy resources -- 51 percent, for cement -- 93 percent, and for lumber -- 69 percent.



[Savings of Material Expenditures
in the Economy
(in billions of rubles)]

In accordance with the plan for the national economy as a whole, relative savings of material expenditures will total 3.6 billion rubles in 1986 as compared to 1.5 billion rubles in 1984.

*According to Materials of the 4th session of the USSR Supreme Soviet

Conservation Seminar in Kiev

Moscow EKONOMICHESKAYA GAZETA in Russian No 47, Nov 85 p 14

[Article under the rubric "Manage the Economy Rationally: Conservation and Thrift": "The All-Union Seminar in Kiev: Resource Conservation -- An Important Economic Reserve"]

[Text] Experience in work to conserve resources and reduce the materials intensiveness of production on the basis of accelerating scientific-technical progress has been accumulated in the UkSSR. Its importance was noted at the meeting of the CPSU Central Committee Politburo.

The all-Union seminar held 12-13 November 1985 in Kiev was devoted to ways to use resources rationally in the economy. Responsible employees of the CPSU Central Committee, the USSR Council of Ministers, USSR Gosplan, USSR Gossnab, and the secretaries of the Central Committees of Union republic communist parties, and party kraykoms and obkoms, and managers and specialists of USSR ministries and departments and planning and supply organs of the republics, krays, and oblasts participated in the seminar.

V.V. Shcherbitskiy, member of the CPSU Central Committee Politburo and first secretary of the Ukrainian CP Central Committee, spoke to the seminar participants.

The drafts of the new edition of the CPSU Program and the Basic Directions of Economic and Social Development of the USSR for the 12th Five-Year Plan and in

the Period till the Year 2000, he said, stress the need to consistently step up the economy measures which are one of the major factors of production intensification and to convert resource conservation into a decisive source for satisfying the growing needs of the economy.

The speaker noted that in accordance with the decisions of the October 1985 Plenum of the CPSU Central Committee, study and discussion of these major documents of the party is now being organized and is going on in a business-like manner in the republic's party organizations and labor collectives, as in all corners of our immense Motherland. The tasks they advance to accelerate the country's socioeconomic development and raise the economy to a qualitatively new scientific-technical and organizational-economic level are receiving general party and all-people's support.

V.V. Shcherbitskiy described the place and role of the Ukrainian SSR in the country's unified economic complex and stressed that party organizations and labor collectives, as the CPSU Central Committee demands, are persistently working to use the great production and scientific-technical potential created in the republic better and insure a fundamental increase in the efficiency of social production. In all its complex and multifaceted work, primary importance is given to reducing expenditures of labor, material, and financial resources.

The conception of resource conservation most fully meets the party's strategic line to accelerate the country's economic and social development. For the republic the need to rapidly perform this task is dictated by the specific features of the republic's economy: the economy uses more than 340 million rubles worth of material resources every year.

Using traditional technologies for extracting and processing raw materials naturally leads to the formation of enormous amounts of secondary resources and production waste products. Substantial capital investments allocated to develop production are also diverted to remove and store production wastes. In addition to this, the ecological situation is complicated. All this required that a set of measures be implemented on a general republic level. In order to solve these problems it was necessary to refine the management of scientific-technical progress as a whole.

The task was to create an integrated system for managing scientific-technical progress on the scale of the republic. Having extensively utilized the experience of the party committees of Moscow, Leningrad, and the fraternal Union republics, the Ukrainian CP Central Committee and the UkSSR Council of Ministers adopted measures to strengthen planning principles in developing science and technology.

V.V. Shcherbitskiy emphasized that the decisive factor for increasing the efficiency of the system for managing scientific-technical progress is, as practice has shown, the guiding role of party committees, especially in overcoming departmental barriers. A council to promote scientific-technical progress was created under the Ukrainian CP Central Committee and similar councils were created under party obkoms, gorkoms, and raykoms. The activity

of the councils made it possible to focus the efforts of party, Soviet, and economic organs on the most urgent tasks of intensifying the economy.

The system of special-purpose scientific-technical programs proved itself in solving major, above all intersectorial, problems of conserving resources. The fulfillment of assignments on the "Trud," "Energokompleks," "Metall," "Materialoemkost," and other programs made it possible to achieve important results in the current five-year plan period.

The republic is completing the formulation of special-purpose scientific-technical programs for the 12th Five-Year Plan period. In doing so, consideration is given to already existing experience which confirms that the programs should be created above all in priority areas of scientific-technical progress, in general be intersectorial in nature, and be fully provided with necessary resources.

Questions of drawing secondary raw and processed materials in economic circulation occupied a significant place in the speech. It was noted that 550 million tons of secondary resources and industrial waste products, or 1.3 times more than in the 10th Five-Year Plan, have been drawn into industrial production since the start of the 11th Five-Year Plan. The proportion of these resources and waste products in total resource consumption was brought up to 12.2 percent. During this period 13.5 billion rubles worth of output, including consumer goods, was produced in the republic using secondary resources. On the whole, in the current five-year plan period implementing resource conservation measures made it possible to reduce the materials intensiveness of output produced by 3.6 percent instead of the 1.9 percent envisioned by the five-year plan. Some 4 billion rubles worth of national income was received in the republic through this factor alone.

This is only the start of the great project at which the CPSU Central Committee is aiming. We must learn to prudently use each ton of metal, oil, and fertilizer, each kilowatt of electricity, and each cubic meter of wood.

V.V. Shcherbitskiy discussed the specific steps that are already being taken to realize the tasks posed by the CPSU Central Committee -- to meet 75-80 percent of the planned increase in needs for raw and processed materials, fuel, and energy through their conservation. He emphasized that work being done in the republic to improve the utilization of present production and scientific-technical potential will make it possible to achieve in 1986 the rate of production growth on the level of the average annual indicators envisioned by the draft of the Basic Directions.

Solving the many fundamental questions of resource conservation and a higher level of use of secondary resources requires that the system of planning and norm-setting and investment policies be refined and that substantial amounts of capital be allocated to develop and extensively introduce resource-conservation techniques and technology on the national level. It is now urgently necessary to improve recordkeeping of the use of raw and processed materials and the system of price-setting and material incentive to maximize the involvement of secondary resources in economic circulation. Implementing these and other fundamentally important tasks not only requires great effort

from party organizations and labor collectives, but also a change in the very approach to the matter and in the style of work and methods of management and a psychological restructuring of many management personnel, workers, and employees.

Questions of reducing the materials intensiveness of production on the basis of accelerating scientific-technical progress was the topic of the report by academician B.Ye. Paton, president of the UkSSR Academy of Sciences. He noted that a great deal of attention is being devoted in the republic to priority development of special-purpose fundamental research oriented to achieving final results.

The report stressed the importance of obtaining new materials with high technical-economic parameters and using them extensively in economic sectors. The practices of planning, designing, and organizing the series production of new equipment should be fundamentally reorganized on this basis.

Among the tasks which the efforts of academic institutions are focused on are the rational use and conservation of metal and the realization of a uniform plan for its production and use. The creation of all-state services to fight against corrosion, the introduction of reinforcement and protective surfaces and progressive technologies for processing metal, and the creation and use of light metal designs are important.

UkSSR Academy of Sciences institutes are making an important contribution to realizing the republic's comprehensive "Materialoemkost" program. A broad complex of research on this problem is being conducted jointly with the academies of sciences, research institutes, and VUZes of the Union republics.

UkSSR Gossnab chairman P.I. Mostovoy gave a report and discussed the role which supply and marketing organs play in the work being done in the republic to intensify production and shared the experience of involving secondary resources and above-norm and unused balances in economic circulation, organizing supplementary production of scarce output in free capacities of associations and enterprises, and supplying consumers with output of greater technological preparedness. He emphasized that the 12th Five-Year Plan envisions fundamentally expanding the products list and assortment of production services of Gossnab and substantially increasing their volumes.

In the speaker's opinion, one of the Union machine building ministries should be made the head ministry for producing equipment for recycling secondary resources. The resource conservation cause will benefit if the system for drawing above-norm assets into circulation is revised and simplified.

The seminar participants were familiarized with practical experience in resource conservation and reduction of materials intensiveness accumulated in the republic's enterprises, scientific institutions, and organizations.

This know-how is extensively represented at the intersectorial exposition at the UkSSR VDNKh [Exhibition of the Achievements of the Economy of the Ukraine] which tells of the introduction of low-waste, no-waste, and resource-

conservation technologies and progress in realizing the republic's comprehensive scientific-technical programs. More than 30 progressive technologies and other innovations which made it possible to save more than 135 million rubles were introduced in machine building enterprises in the present five-year plan period within the framework of just one of them -- the "Materialoemkost" program.

The seminar participants visited a number of UkSSR Academy of Sciences institutes. They visited an experimental plant at the Electric Arc Welding Institute and were familiarized with the organization of the work of engineering centers which have been set up in the institute and which help accelerate the introduction of developments into production. Materials specialists and employees of the Brovary Powder Metallurgy Plant told the visitors about the forms of creative cooperation and ways to improve them further. The enterprise's output, which is produced with the maximum possible use of raw and processed materials, saves the economy some 50,000 tons of rolled metal products every year.

Work to improve the use of processed material and raw material resources which is being done in the UkSSR Gosstab system aroused a great deal of interest. An important direction of this work is the creation of enterprises to manufacture and supply output of greater production preparedness. The seminar participants inspected one of them which is already in operation -- Kievmetalloprom. In all 10 such regional centers are to be built in the republic.

B.I. Gostev, the chief of the Economics Department of the CPSU Central Committee, took part in the seminar's work.

Statistical Analysis in Conservation

Moscow VESTNIK STATISTIKI in Russian No 11, Nov 85 pp 24-29

[Article by K. Chobanu, candidate of economic sciences and acting lab head at the USSR Central Statistical Administration Scientific Research Institute, under the rubric "The Theory and Practice of Statistics": "Analysis of the Use of Material Resources"]

[Text] Improved use of material, labor, financial, and natural resources is a fundamental element of production intensification.

The largest reserves for conserving past labor are in the reduction of materials intensiveness since material expenditures are a decisive part of expenditures to create society's gross and net product. Statistical data shows that in present conditions a 1-percent reduction in material expenditures in production sphere sectors is equivalent to an 8-billion ruble increase in national income. By analyzing the correlation of expenditures of past and live labor on the basis of data on the structure of aggregate social product, it can be established that in the last 20 years this correlation changed in favor of increased embodied labor. So, while in 1960 the

proportion of material expenditures in the country's social product was 52.3 percent, at the present time the figure is 57-58 percent.

The proportion of material expenditures (excluding depreciation) in the total volume of gross product is more than 70 percent, while the figure is 90-95 percent in some of the most materials-intensive sectors of industry -- the light and food industries.

Specialists have calculated that saving 5 billion rubles worth of material resources reduces capital investments in the raw materials and extracting sectors by 30 billion rubles.¹

The problem of reducing the materials intensiveness of output is also urgent because the overwhelming part of objects of labor -- mineral raw materials and fuel -- is obtained from nonrenewable natural resources whose prime cost steadily increases as their mining has moved to inaccessible, remote regions of the country with unfavorable climate.

In this way, conservation measures for material resources today are one of the main principles of socialist economic activity and a form of manifestation of economic law -- the law of conserving time which, as K. Marx wrote, remains the first economic law on the basis of collective production.

To a significant degree rational use of material resources increases the country's rate of economic growth. The following are necessary in order to conserve material resources: introduction of fuel- and energy-saving technological processes, among them no-waste technology; comprehensive recycling of raw and processed materials; increased production of economical machines with high unit capacity, especially for thermal and atomic power plants; development of centralized heating of cities; reuse of materials and thermal energy resources; reduced weight of machines and equipment per unit of useful effect; extensive application of new design materials (for example, replacing metal with plastic), and so on.

All this also predetermines the tasks of statistics related to keeping records and monitoring for conservation, consuming material resources correctly, and reducing the materials intensiveness of production.

In recent years statistics' role in providing data on the issues of rational and economical use of material resources to management, planning, and economic organs at all levels of management of the economy has greatly expanded.

At the present time the USSR Central Statistical Administration and the central statistical administrations of the Union republics obtain, formulate, and present needed data on deliveries, existence, use, and conservation of the country's raw and processed materials and fuel-energy resources.

Statistical reports reflect: balances, receipt and consumption of material resources; fulfillment of norms and assignments to reduce the consumption of raw and processed materials and fuel; above-norm balances, shortages, theft, and spoilage of physical assets; procurement and use of secondary raw materials and waste products, and so forth.

In addition, in recent years the USSR Central Statistical Administration together with interested ministries and departments has done a lot of work involving rational use of the country's material resources: the system for keeping records and making reports, economically analyzing and monitoring the fulfillment of plan assignments on the average reduction of expenditure norms for the major types of raw and processed materials, and the like has been improved.

State statistics organs are working to add new indicators of the norms of stocks of material resources held by consumers and suppliers to statistical reports, identify reserves in the economy, use secondary materials, and monitor the formation and use of above-norm stocks.

However, it cannot be said that the task of studying conservation of material resources is being successfully resolved everywhere. Opportunities and reserves of the rational use of raw and processed materials, fuel, and energy are by no means being fully utilized. Issues of fulfilling plan assignments to conserve material resources and observe the norms of their expenditure have not yet become characteristic of the activity of a number of ministries, departments, and local management organizations.

Statistical organs face the task of further improving statistical reporting to reflect the use of the country's material resources, deepening the analysis of the results achieved, and identifying reserves. Warning data which reveals the irrational use of material resources, losses, and a low level of use of secondary raw materials, by-products, production wastes, and the like is especially urgent.

The main instrument for statistical study of the scale, structure, and dynamics of material production resources and for identifying reserves to increase the efficiency of social production and so forth is the system of indicators which characterize these phenomena.

We have developed the System of Statistical Indicators that describe the use of material resources in the production sphere and information support for them, based on the "System of Statistical Indicators of the Efficiency of Social Production," ratified by the USSR Central Statistical Administration in 1979, and other methodological materials of this administration and sources in the literature (see: A.P. Checheta, "Ekonomiya materialnykh resursov: puti sovershenstvovaniya ucheta i analiza" [Conserving Material Resources: Ways to Improve Recordkeeping and Analysis], Moscow, Finansy i statistika, 1983, pp 13^r -136).

It includes the following:

1. Indicators of materials intensiveness and materials return

- 1.1. General materials intensiveness and materials return is defined as the relationship of material expenditures (including depreciation and excluding it) to gross national product, final product, national income, commodity output, and so forth (including

turnover tax and excluding it) in current prices in the economy as a whole, in Union republics, sectors, and ministries, and so on (figured on the basis of combined tables of the national economic balance).

1.2. Individual indicators of materials intensiveness; the specific expenditure of certain groups (types) of objects of labor (output of "clean" sectors) is defined as the relationship of expenditures of a certain group (type) of raw or processed material, fuel, or energy to the total output (work) (per ruble of commodity turnover and the like) in the sectors of material production and so forth (calculated on the basis of the data of intersectorial balance reports and the like).

1.3. Indicators which characterize losses of material resources and nonproduction expenditures.

The generalizing indicator of losses of material resources on the national economic level is defined as the sum of all losses in all phases of the reproduction process in sectors of the national economy (calculated on the basis of the "system of indicators of losses").

2. Relative conservation of material resources

2.1. Relative conservation of material expenditures (including depreciation and excluding it) as a result of change in the materials intensiveness of production.

2.2. The turnover rate of working capital is the relationship of working capital to one-day turnover in the sale of output (calculated according to Table 3-a "The Turnover Rate of Working Capital" and the forms of annual reports by sectors, ministries, and types of activity).

2.3 The turnover rate of norm-controlled working capital is the relationship of average annual balances of norm-controlled working capital to one-day turnover in the sale of output excluding the turnover tax (calculated according to Table 3-a "The Turnover Rate of Working Capital").

3. Factors which effect a change in the level of materials intensiveness and materials return

3.1 A change in the prices for raw and processed materials, fuel, and other physical assets and in tariffs on freight shipments is determined on the national economic level and by sectors (calculated according to form No 6 and others).

3.2 A change in the norms of materials expenditure in the same context and on the basis of the same form No 6.

3.3 A change in marketing-procurement expenditures and the organization of material-technical supply and interruption of the rhythmicity of deliveries of materials, fuel, and items in the same context (calculated according to form No 1-SN, form No 4-SN, and form No 5-SN).

3.4. The deviation of actual expenditure from the norm of the specific type of materials by types of output and by sectors in the context of the group of materials and the groups of output (calculated according to form Nos 11-SN and 12-SN).

3.5. Structural changes between sectors in the production and use of raw and processed materials and by sectors of the material sphere (calculated according to form No 6 and others).

3.6. Losses of raw and processed materials from the production of defective output and above-plan wastes during storage and transport and so forth by sectors of the national economy (calculated according to forms of annual reports).

3.7. Stimulation to conserve raw and processed materials: bonuses for conserving raw and processed materials, fuel, and energy by sectors of the national economy (calculated according to form No 9).

4. Assignments on the average reduction of norms of expenditure and conservation of material resources

4.1. Assignments on the average reduction of norms of expenditure of materials by sectors in the context of the groups of materials and the groups of output (calculated according to forms Nos 11-CH and 12-SN).

4.2. Reduction of norms of expenditure according to the products list of materials and output (by factors) and reduction of nonproduction expenditures in the same context (calculated according to forms Nos 11-SN and 12-SN).

4.3 Ceiling of material expenditures per ruble of commodity output, by sectors in the context of the groups of materials and the groups of output (calculated according to form No 1-S).

4.4 Comprehensive no-waste recycling of raw and processed materials and use of production wastes and secondary raw materials by sectors in the context of groups of materials and groups of output (report calculation).

4.5. Introduction of interchangeability of materials and identification of unused material reserves (report calculation).

4.6. Reduction of transport-procurement expenditures by types of materials, by sectors, and so forth.

4.7. Introduction of scientific-technical progress and new production technologies and mechanization and automation of the production process (improvement of technical parameters, reduction of item weight, increase in output quality) by sectors and so on.

4.8 Stimulation to conserve materials (bonuses for conserving materials, fuel, and energy -- calculated according to form No 9).

This system does not require additional statistical reports and helps improve the use of currently existing statistical information and deepen the analysis of the use of material resources.

The "materials intensiveness" indicator, which characterizes the use of material resources, is central to the system. It is determined by the relationship of material expenditures to output volume (gross national product, gross or commodity output, and so forth).

For sectors of material production the question of measuring the materials intensiveness and conservation of materials in sectors which produce material goods and in sectors of the infrastructure which render production services is formulated in a different way.

In industry, trade, and procurement, materials intensiveness is determined both including and excluding turnover tax. The calculation is made in current and comparable prices.

For analytical purposes, materials intensiveness can be defined by various methods: a) as the relationship of expenditure of a certain material resource to the volume of output created; b) as the relationship of the volume of primary raw materials to the volume of final product produced; c) as the ratio of intermediate and final output, and the like.

The proposed system contains generalizing and particular indicators of materials intensiveness; this makes it possible to carry out a comprehensive, multifaceted analysis of the use of material resources on different levels of management.

In order to analyze the trend toward change in material expenditures, the use of particular indicators of materials intensiveness which should be constructed taking into account the use of the main material resources of the economy is of great significance.

In order to study the materials intensiveness of output on various levels of industry management and to analyze the fulfillment of plans by enterprises, associations, and sectors as a whole, such indicators as sectorial (subsectorial) materials intensiveness, general materials intensiveness of the commodity output of associations and enterprises, particular indicators of materials intensiveness for describing the effect of using certain elements of physical assets, the specific materials intensiveness for establishing reduction of materials intensiveness per unit of output, and materials intensiveness of certain assemblies and parts, and the like must be used.

Generalizing and summary indicators of losses can also be defined in the territorial-administrative context and by the country's intersectorial production complexes.

Scientific-technical progress leads to different ratios between the expenditures of live and embodied labor in gross national product. The capital-labor ratio in gross national product is steadily rising; as a result, the volume of depreciation and its proportion in the value of output is increasing. Taking into account differences in the economic essence of depreciation relative to current material expenditures, we propose calculating the materials intensiveness of output in two variants: including depreciation and excluding depreciation. The indicator "depreciation capacity of the unit of output" and the indicator "specific depreciation deductions from certain types of fixed capital" can also be calculated. In addition, indicators of the output-capital ratio and the capital-output ratio should be calculated in order to analyze the use of fixed production capital.

The important task of socioeconomic statistics is to demarcate and analyze measures to eliminate the irrational use of material resources. An inseparable part (element) of management, economic analysis deepens the search for reserves of production intensification which result in reduced materials intensiveness.

The role of methods of reducing materials intensiveness which require no substantial capital investments is especially expanding. Among them above all are measures to conserve material resources which envision refining the recordkeeping system and planning their production and consumption.

The main factors which can be named that effect a change in the level and dynamics of materials intensiveness and deviation in actual materials intensiveness from the planned intensiveness are: irrational consumption of materials; its irregularity; deviation from the technology of manufacturing items, which causes defects; losses of materials related to above-plan wastes; replacement of one material with another; changes in prices for raw and processed materials and fuel, and changes in tariffs for freight shipments by the established procedure; changes in transport-procurement expenditures; nonfulfillment of measures to conserve materials envisioned on the organizational-technical measures level, and the like.

The basic tasks of the economic analysis of the use of material resources and the materials intensiveness of output can be formulated in the following way: determination of change in the level of materials intensiveness of output production over time and as compared to the plan; monitoring of the fulfillment of assignments on the average reduction of expenditure norms for major types of material resources and conservation of material expenditures and conformity of actual material expenditures to the maximum level (ceiling) of expenditures per ruble of commodity output; analysis of the data on fulfillment of norms of expenditure of raw and processed materials, fuel, and energy to produce the major types of output and evaluation of their objectivity and reliability; and generalization and analysis of data on the amount of waste products and losses of materials, fuel, and energy during

production and consumption, identification of nonproduction losses, and evaluation of the efficiency of ways to reduce wastes and losses.

And here there is analysis of the scope, dynamics, and sources of compensating for losses and the losses by factors of production and reproduction resources, by the main sectors of material production, and by the phases and causes of their appearance.

Every year planning and statistical organs formulate a broad set of material balances; using them the intersectorial and intrasectorial proportions of development of the economy are determined, material resources are distributed, and so forth. The system of these balances mainly consists of so-called monoprodukt (single-product) balances and encompasses a broad circle of products in physical form.

They play an important role in planning and analyzing the formation and use of the country's material resources. Statistical practices show, however, that these traditional forms and methods of formulating material balances do not allow the degree of increased efficiency of the use of resources and the movement of wastes in production to be determined. Single-product balances do not take into account the factor of replacing certain materials with others and do not always insure conformity between physical and value indicators. Uniform comprehensive balances of production and use of similar interchangeable products as one of the progressive directions for improving the balance method must be formulated.

Analysis of the use of secondary resources and production and consumption wastes is of practical interest. At the present time assignments on using secondary raw materials are determined in the state plan of economic and social development of the USSR. A new form of quarterly reporting was introduced starting in 1984; according to this enterprises must give the actual amount of the formation and use of all types of production wastes.

Taking into account the importance of the problem of drawing waste products and by-products into economic circulation, the role of the planning of these resources must be increased and at the same time recordkeeping of waste products and secondary raw materials must be improved.

In this direction a classification of waste products and methods of monetary evaluation should be worked out, and recordkeeping and reporting on the formation and use of secondary raw materials and waste products should be organized correctly. The creation of a system of norms of the production of waste products, norms on processing secondary raw materials, and the like is becoming very important. The certification ["pasportizatsiya"] of waste products and secondary raw materials represents an important tool in organizing recordkeeping for waste products.

The maximal involvement of above-norm and unused physical assets in economic circulation is an important reserve for conserving materials. It is a prerequisite for insuring strict state control of their proper use and the condition of stockpiles. They are the raw and processed materials, articles,

and other material resources held by enterprises, associations, and organizations in amounts exceeding norms for production stocks.

The objectivity of information on material expenditures depends on the organization of bookkeeping.

Increasing the role of accounting for materials and the objectivity of its data depend on forms and methods of control which would make it possible to efficiently summarize the results of work to conserve material resources in all links of production, identify intraplant reserves, eliminate cases of mismanagement, and lower the prime cost of output.

FOOTNOTE

1. K. Ulybin, "On the Way to Accelerating the Intensification of Social Production and Increasing its Efficiency" in EKONOMICHESKIYE NAUKI, No 2, 1983, p 24.

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